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- Compact
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- Chemical supply

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Free registration at: foodproexh.com/register

## Redefine the future of food

Four years in the making, foodpro 2021 promises to reunite and reconnect the industry, featuring a show floor of Australia's top suppliers in food and beverage manufacturing. In this special What's New at foodpro issue of our What's New in Food Technology \& Manufacturing magazine you will find details about the equipment and services that will make foodpro 2021 a must-attend event.

The years clouded by the pandemic have created many challenges for the food and beverage industry - from COVID-19 lockdowns and COVID-19 outbreaks in food processing plants, to cyber attacks, supply chain disruptions and sustainability demands from consumers. But as Winston Churchill's famous saying goes, "you should never waste a good crisis", and I think the F\&B industry has heeded these words by innovating more than ever.

The economic outlook looks bright, and at this year's event, F\&B processors and manufacturers will be more eager than ever to find out about all the latest equipment and solutions for their businesses.

Making the most of their time at foodpro, visitors can also attend the Australian Institute of Food Science and Technology's annual convention. The AIFST 2021 is running concurrently with the four-day foodpro 2021 event, from Monday 11 October to Tuesday 12 October at the Novotel, Sydney Olympic Park. To book tickets for the conference, visit www.aifst.asn.au.

## Celebrating 40 years

WF Media is celebrating 40 years of publishing this year so don't miss out on visiting the What's New in Food Technology \& Manufacturing team on Stand T21. If you don't already receive this free magazine and its thrice-weekly eNewsletters that keep you up to date with all the latest industry news, please take a minute to go online to register at www.foodprocessing.com.au/subscribe. You can also subscribe at our stand.

Regards

## Carolyn Jackson <br> Editor

Details correct at the time of printing.

Sun 10 Oct 11:00 am - 5:00 pm
Mon 11 Oct 10:00 am - 5:00 pm
Tue 12 Oct 10:00 am - 5:00 pm
Wed 13 Oct 10:00 am - 3:00 pm


| $10-13$ October 2021 |  |
| :--- | :--- |
| Sydney Showground, |  |
|  |  |
| Sydney Olympic Park |  |
| Sty |  |

$\square$et us delve further into what to expect at this year's foodpro 2021 event.

Hosted this year at Sydney Showground, foodpro promises to reunite and reconnect the industry, featuring a show floor of Australia's top suppliers in food and beverage manufacturing.
foodpro will bring together manufacturing and processing decision-makers and buyers for four days of collaboration, product launches, networking and new technology. foodpro is the only face-to-face industry event of its kind to be taking place in 2021, making this a unique opportunity to conduct business and bring all the expertise together in one place.

Event Manager Melissa Clendinen said: "This year's event is more important than ever with our food industry being struck by major events such as the bushfires and the coronavirus.
"What we do now really matters - not just for our own industry, but the health of the entire country.
"The return of foodpro and associated networking is a major turning point for our industry in creating a COVID-normal Australian economy and getting people back to doing business together."

## A COVIDSafe event

The foodpro team understand the importance of events to support business and economic growth; you can expect the show floor to look a little different to previous years.
foodpro is using a proven and fully government-compliant COVIDSafe event system, working with all stakeholders to ensure the delivery has a strong focus on ensuring the safety of exhibitors and attendees, adhering to all guidelines and restrictions.

This includes measures such as queue management and crowd control, digital signage, contract tracing and QR code scanning, rigorous cleaning and COVID marshals.

## All the products in one place

Visitors this year can look forward to exploring a show floor dedicated to every step in the manufacturing process, from Traceability \& Provenance, Logistics \& Materials, Packaging Materials, Ingredients, Science \& Technology and Plant Equipment.

## We bring colour into view!

Compact capacitive level switches with $360^{\circ}$ custom-colour status display


## Look mho exhibiting



## foodpro



Details correct at the time of printing.


| Exhibitor | $\begin{aligned} & \text { Stand } \\ & \text { No } \end{aligned}$ |
| :---: | :---: |
| A-Safe | X6 |
| Aalborg CSP A/S | D28 |
| ADM PACKAGING AUTOMATION | J28 |
| Aerofloat Wastewater Treatment | K8 |
| AGILENT TECHNOLOGIES | X2 |
| Agrifood Technology | W1 |
| Ahrens Group | W31 |
| AIFST \& Food Australia | T22 |
| AIR LIQUIDE AUSTRALIA | D46 |
| AIRANDE/USAAUS | U2 |
| All Pumps | U16 |
| All Purpose Pumps | Y16 |
| ALLROUND PACKAGING | B9 |
| ALS PTY LTD | S6 |
| Ammongas A/S | D28 |
| AMSL SCIENTIFIC | R6 |
| ANCA MOTION | F34 |
| ANTON PAAR AUSTRALIA PTY LTD | R39 |
| APC TECHNOLOGY | F15 |
| APTEAN Food \& Beverages ERP | Z2 |
| APTUS BUSINESS SOLUTIONS | S37 |
| Aquamin - Deltagen Australia | P13 |
| Aquatiq Australia | U8 |
| ARGUS | K22 |
| ASSA ABLOY Entrance Systems | Z16 |
| Au2mate | D28 |


| Exhibitor | Stand <br> No |
| :---: | :---: |
| AusPress Systems Pty Ltd | W14 |
| AUSTBROKERS TRADE CREDIT | S28 |
| AUSTRALIAN NATIVE PRODUCTS | Q9 |
| AUSTRALIAN WRAPPING COMPANY P/L | D8 |
| Australis Engineering | C40 |
| AUSTRALWEST | D50 |
| B\&B FoodPak | F36 |
| BASTION PACIFIC PTY LTD | M28 |
| Bayside Group | Q38 |
| Biogasclean A/S | D28 |
| BIOMÉRIEUX | T2 |
| Biosteam | Y37 |
| BMA BELTING | D40 |
| BOC Limited | C42 |
| BOTANICAL INNOVATIONS | R11 |
| BRENNTAG | M6 |
| Bucher Unipektin AG | F7 |
| BÜRKERT FLUID CONTROL SYSTEMS | Z22 |
| Busch ANZ Pty Ltd | PA28 |
| BUTLER TECHSENSE AUSTRALIA | X14 |
| BVAQ Pty Ltd | U6 |
| CAPS AUSTRALIA | Z12 |
| CARMI FLAVORS | Q12 |
| CASE PACKING SYSTEMS | H22 |
| CBS FOODTECH PTY LTD | D16 |
| CHILLPRO SYSTEMS PTY LTD | K1 |
| Cloud Culture Pty Ltd | U35 |


| Exhibitor | $\begin{aligned} & \text { Stand } \\ & \text { No } \end{aligned}$ |
| :---: | :---: |
| Combigas | D28 |
| CONNELL | P12 |
| CONTECH - CONVEYOR TECHNOLOGY | H14 |
| COSPAK | F27 |
| CSB-System | K11 |
| CSIRO | Q11 |
| CUDDON FREEZE DRY | U15 |
| DANFOSS AUSTRALIA PTY LTD | D28 |
| Danish Export Association | D28 |
| De.mem-Akwa | Z29 |
| Dematic | B16 |
| DETECTAMET DETECTABLE PRODUCTS | C7 |
| DIAA | V6 |
| Diverseco | E46 |
| Dolav Australia | D2 |
| DST Dryer | Z13 |
| DYNAPUMPS | Q27 |
| ECOWIZE PTY LTD | X24 |
| ELISA SYSTEMS | X1 |
| Ennio International | J14 |
| ERIEZ MAGNETICS | Y30 |
| ERNEST FLEMING MACHINERY - INKJET | A28 |
| Esko Australia Pty LTD | J39 |
| EUROFINS | V16 |
| Evolve Scientific Recruitment | T27 |
| Extreme Packaging Solutions | F28 |
| Finance@work Pty Limited | K6 |
| Flottweg Australia | D7 |

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| Exhibitor | $\begin{aligned} & \text { Stand } \\ & \text { No } \end{aligned}$ |
| :---: | :---: |
| Flowcrete | X34 |
| FLOWTHERM AUSTRALIA | Q31 |
| FMCG Industry Solutions Pty Ltd | Y23 |
| Food \& Drink Business | L27 |
| FOOD PROCESS <br> MACHINERY Pty Ltd | B8 |
| Fosroc ANZ | PB36 |
| Foss Pacific Pty Ltd, South East Asia | D28 |
| Garlock Pty Ltd | Y14 |
| GELITA Australia | N12 |
| GEMIDAN ECOGI A/S | D28 |
| GOLD PEG - NATEC NETWORK MEMBER | D1 |
| GORDON BROTHERS INDUSTRIES | PA6 |
| GP Systems | J27 |
| GRAINTEC SCIENTIFIC | S11 |
| HALL INDUSTRIES AUSTRALIA PTY LTD | B2 |
| Hally Labels | E36 |
| Hanna Instruments | V2 |
| HAWKINS WATTS AUSTRALIA | M22 |
| HELA | N27 |
| Highgate Group | J22 |
| Hipex Pty. Ltd. | U22 |
| HMPS and Propac Industrial | C34 |
| Hoctor Refrigeration | PA13 |
| HRS PROCESS SOLUTIONS | S16 |
| HUMISCOPE | Z8 |
| HYDRO INNOVATIONS | PB5 |


| Exhibitor | $\begin{aligned} & \text { Stand } \\ & \text { No } \end{aligned}$ |
| :---: | :---: |
| IFM EFECTOR | C9 |
| iFoodDS | T32 |
| IMCD Australia Pty Limited | Q22 |
| INOXPA | R32 |
| INTEGRITY COMPLIANCE SOLUTIONS | Q10 |
| INTRALOX | B40 |
| IP Enclosures | Z14 |
| IPCO | K38 |
| IUGIS | W11 |
| Ixom | R2 |
| JARVIS AUSTRALIA | B28 |
| JBT - Proseal Australia Pty Ltd | F20 |
| JL LENNARD PTY LTD | C20 |
| JMP HOLDINGS | F27 |
| John Morris Group Pty Ltd | U11 |
| Johnson Screens | C4 |
| Key Diagnostics Pty Ltd | X7 |
| KHS Pacific Pty Ltd | D49 |
| LAAVA | U32 |
| LABELMAKERS GROUP | K24 |
| LABWARE | T1 |
| Landia A/S | D28 |
| LAPP AUSTRALIA | E20 |
| LUMIX PROCUT | E40 |
| MACHINE KNIVES (AUST) PTY LTD | H12 |
| Marel | B20 |
| MARKEM-IMAJE | G28 |
| MARTOR | C8 |
| Matcon Limited | J27 |


| Exhibitor | $\begin{aligned} & \text { Stand } \\ & \text { No } \end{aligned}$ |
| :---: | :---: |
| McCormick Flavour Solutions | P22 |
| Meat \& Livestock Australia | S22 |
| MEFE - Freund | X18 |
| Merieux NutriSciences Australia | T14 |
| METROHM ANZ | V1 |
| MIL-TEK WASTE <br> SOLUTIONS PTY LTD | D28 |
| Molenaar Australia P/L | B10 |
| MOSCA AUSTRALIA | E2 |
| Motion | U21 |
| MTA AUSTRALASIA PTY LTD | Z26 |
| Multisteps Industries | D19 |
| MUNTERS | W18 |
| Naturex | N16 |
| Neogen | S12 |
| Netzsch Australia Pty Ltd | T12 |
| Niche Gas Products Pty Ltd | J7 |
| Nilfisk Pty Ltd | D28 |
| Niras Australia | D28 |
| Nu-Mega Ingredients | Q6 |
| O'BRIEN BOILER SERVICES PTY LTD | Y22 |
| OFI Weigh \& Inspection | A16 |
| Omni Group | D15 |
| Oomiak Pty Ltd | J1 |
| Open IIoT | S32 |
| Orbit Cleaning Services Australia | Z37 |
| Oterra | Q8 |
| OZKOR PTY LTD | Y5 |

# Rethink your food production process 

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| Exhibitor | $\begin{aligned} & \text { Stand } \\ & \text { No } \end{aligned}$ |
| :---: | :---: |
| Pac Food Pty Ltd | M11 |
| PACIFIC LUBRICATION CONSULTANTS | M21 |
| PAQ_IT | L12 |
| PBSA I Senor | L39 |
| PerkinElmer | Y1 |
| PFG Group Victoria Pty Ltd | F10 |
| PHARMEQUIP PTY LTD | B34 |
| POLLEN CONSULTING GROUP | W2 |
| POLYTIJ AUSTRALIA | C14 |
| PROCESS AUTOMATION \& CONTROLS | C50 |
| PROFICIENCY TESTING AUSTRALIA | W5 |
| Programmed | PB6 |
| PROTECTION EXPERTS AUSTRALIA | K28 |
| PRYDE MEASUREMENT <br> PTY LTD | A10 |
| Pump Engineers (Australia) Pty Ltd | W22 |
| Radius Technology P/L | H3 |
| Reactive Engineering Pty Ltd | C1 |
| Regethermic | M13 |
| Rentokil Initial | R8 |
| RESULT GROUP | E30 |
| RESULT GROUP | T36 |
| RICHARD FOOT MACHINERY | E6 |
| ROBOTIC AUTOMATION | L14 |
| ROCKWELL AUTOMATION / ENDRESS+HAUSER | K14 |
| ROLLEX AUSTRALIA | G22 |
| Romer Labs Australia | S5 |


| Exhibitor | Stand |
| :--- | :--- |
| No |  |$|$| ROXSET SAFETY FLOORING | PB4 |
| :--- | :--- |
| RYDELL BELTECH | K5 |
| SAFEGUARD COMMERCIAL <br> FLOORING | Y33 |
| SARAYA AUSTRALIA | PB12 |
| SAVANNAH BIO SYSTEMS <br> PTY LTD | P16 |
| SCHENCK PROCESS <br> AUSTRALIA | E1 |
| SCHMALZ Australia | K12 |
| SCHUR STAR SYSTEMS <br> AUSTRALIA | E42 |
| Scott | C49 |
| SELECT EQUIP | E28 |
| SGS Australia Pty LTD | V8 |
| SHIMADZU SCIENTIFIC | U1 |
| INSTRUMENTS |  |


| Exhibitor | Stand <br> No |
| :---: | :---: |
| Tapflo | Z30 |
| TECHNOMIK PTY LTD | H28 |
| Teralba Industries | H2 |
| The Australian Institute of Packaging | N/A |
| The Coffee Brewmasters | P2 |
| THE GLOVE COMPANY | J12 |
| THE HEALTH INGREDIENTS CO. | Q16 |
| THETA TECHNOLOGIES | S8 |
| Thompson Meat Machinery Pty Ltd | A20 |
| THRIVING ENTERPRISES PTY LTD | L29 |
| Total Construction Pty Ltd | H8 |
| Triton Commercial Systems | C45 |
| TXM LEAN SOLUTIONS | S24 |
| Undercover Roasters | N38 |
| Vendart Diagnostics | X5 |
| VGL - ALLIED CONNECTORS | PB1 |
| Vibration Systems \& Solutions | B45 |
| VIDYA Australia | P11 |
| Visy Technology Systems | D45 |
| Waterform Technologies | Y7 |
| Watson-Marlow Pty Limited | X30 |
| WEDDERBURN | E3 |
| Westwater | T25 |
| What's New in Food Technology \& Manufacturing | T21 |
| Wiley | D9 |
| WR \& D WELLS | W24 |
| Zip-Pak ITW Australia | D4 |

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## Are you a Food Professional? Then read on!



We develop our oil-free air solutions with focus on savings, energy efficiency and lowering the environmental impact. For any application.

## Automation air

Compressed air is used to control the valves and actuators in automated lines for filling, packaging and bottling. With oil-free compressed air, you prevent your automation components from jamming and keep your end product safe.

## Transportation

Compressed air is used to push powdered milk or cocoa powder along pipes. With oil-free air, you will avoid oil contaminant mixing with the powder and maintain the powder purity.

## Cleaning air

Compressed air for cleaning bottles, packaging and moulding prior to filling. Oil in compressed air will contaminate the food containers and alter the flavour and odour of the end product, besides being a health hazard.

Air blowing, aeration
Compressed air is pumped into a liquid to boost its oxygen content. This is used, for example, in fish farming to oxygenate water in lower layers and/or oxidise the sediments. Oil contamination in the air will kill the fish and other fauna.

## Fermentation

Compressed air supplies oxygen to bacteria during fermentation to produce food ingredients such as citric acid, wine and yoghurt. The presence of even small oil traces will affect bacterial activity, create a substandard product and contaminate the end product.

## Food storage

In the air separation process, compressed air is broken up into oxygen and nitrogen. The nitrogen is then used to preserve foods in cans, in larger storage facilities and in
maritime transport. The air must be $100 \%$ oil-free as the nitrogen comes directly into contact with the food. Oil will destroy the membranes in plants which are expensive to replace. Oil will also significantly reduce the life of nitrogen generators leading to costly replacement.

## Cooling and spraying

Compressed air is used to cool down baked goods after they emerge from the oven. Contamination of the air spoils the end product leading to rejections and production losses.

Energy efficient solutions
We continuously strive for energy efficient solutions and responsible use of resources. We are committed to helping our customers on the road to carbon-neutral production. Scan the QR code to find out more!

## Monday 11 October

## 11:00

Monday 11 October
11:15
Redefine the future of food

- foresight on technology, sustainability and what comes next

Brett Wiskar, Wiley Food

## Official opening

In his role as Wiley's Chief Future Officer Brett works with industry bodies and commercial clients to understand and prepare for the future of their industries, markets and supply chains. Brett's keynote will focus on findings in recent projects for corporate clients and industry bodies looking at trends across the food sector out to 2040 touching on:

- How technology will drive safer more sustainable food.
- How personalised food will change retail and food production.
- The opportunities for disruptive tech in the food sector.
- How Australia can benefit from the food disruption of the coming years.
- Where the industry needs professionals and vendors to capitalise on the next wave of innovation.


## Monday 11 October

12:00
The value of sustainable food packaging to the food industry

Every food business has a role to play in lowering their environmental impacts and the first step is to understand the value that lies behind moving to circular and sustainable packaging. Take the first step in your sustainable packaging journey by attending this event run by the AIP.

Monday 11 October
13:00
Where consumer trends are driving F\&B companies in the next five years

The pandemic has disrupted the status quo, and the environment, health and economic issues have never been more at the forefront. With the way consumers view and engage with food and beverage companies changing, particularly when it comes to packaging, Tetra Pak Oceania's Managing Director Andrew Pooch shares the top consumer trends and how the industry must adapt.

Andrew Pooch, Tetra Pak

Details correct at the time of printing.


Rockwell
Automation

We help food and beverage manufacturers become more agile.
Together, we build smart manufacturing operations that can adapt to changing consumer tastes.


Monday 11 October
14:00
Venture science and Company Creation

Duncan Ferguson, CSIRO Agriculture and Food

CSIRO Company Creation is scaling a new model for engaging with industry, to collaboratively build new ventures with investors and entrepreneurs to develop and deliver science and technology to address big market opportunities. It has established a dedicated team to define large market opportunities and build full-stack, transdisciplinary, science-based solutions to meet them. The new ventures provide a vehicle for collaborating with industry, unconstrained by the corporate challenges of annual budget cycles, internal strategy shifts, mobility of senior management, competing internal innovation priorities and a narrow field of opportunity. For investors these ventures are de-risked by the clear path to scale and market that the industry founder brings.
If you have been excited by the growth of the v2food plant-based meat business, or inspired by the global impact potential of the FutureFeed livestock feed ingredient, then you may be the next entrepreneurial industry founder we are seeking. Director of Company Creation, Duncan Ferguson will explain why and how this model will assist in building the new, transformational industries required to feed a growing global population; and catalyse the innovation and commercialisation partnerships required between CSIRO and industry to meet that challenge.

## Monday 11 October

14:45
The future of food traceability in a manufacturing facility
Brett Wiskar, Wiley Food

With sensors, smart manufacturing, the Internet of Things and increased digital power reaching our fingertips, how will factories of the near future manage traceability and provenance as they increase their digital information capability so factories can work smarter, not harder?

## Monday 11 October

 15:15The future of digital traceability options and solutions

Peter Carter, GS1 Australia

Many traceability systems already exist with a range of IT and digital solutions on offer. Computing power and the connectedness of the supply chain, along with interest from buyers of almost instantaneous recall capability, means digital offerings will be changing, but what can we expect to see in the next 5 years? Just where is digital going?

Monday 11 October
15:45
Traceability and packaging
Michael Dossor, Result Group

Packaging is key to delivering food, intact, safely and reliably, to consumers and customers. Consumers are demanding more information about the journey of their food and being certain of its authenticity. Packaging will have a bigger role to play in delivering the expected consumer experience for food traceability over the next five years - but what can we expect?

Details correct at the time of printing.


# For all your Specialty Gas \& Dry Ice Needs 

\author{

- SupaMap - Dry Ice - Carbon Dioxide
}

Seminar Series Mon-Wed-11-13 October 2021

## Monday 11 October

16:15
E-commerce and traceability

- what can we expect in the next five years?

Rod Arenas, Austrade

Tuesday 12 October
10:30
MLA R\&D program level update
Darryl Heidke,
Meat \& Livestock Australia
John Marten,
Meat \& Livestock Australia
Ian Jenson,
Meat \& Livestock Australia

Tuesday 12 October
12:30
Personalised food improvement of texture modified foods for aged care: from design to consumer testing

Aarti Tobin, CSIRO Agriculture and Food

Consumers and retailers are demanding more information about the journey of food and being certain of its authenticity. That interest is only going to increase in the next few years. Come and hear what the future expectations for traceability will be for export e-commerce in the not too distant future.

Includes highlights from Food Safety, Carbon Neutral 2030, Processing Automation, Objective Measurement and Future Food Insights.

It is estimated that by $2050,25 \%$ of the Australian population will be over the age of 65 and this will result in an increase in age-related issues with eating. One of those issues is dysphagia, a medical condition characterised by difficulty with chewing and swallowing food. People with dysphagia often suffer from malnutrition and dehydration, and due to impaired swallowing, choking is a risk. In order to minimise this risk, dysphagia sufferers are often recommended to eat texture modified foods (TMF), where the food is minced or pureed to eliminate the chewing process and assist with the ease of swallowing. Anecdotal evidence suggests that the preparation of TMF is very subjective and can result in poor visual appeal, inconsistencies in texture and poor nutritional quality and taste. This research focused on defining and understanding the issues with TMF in the aged-care sector and, based on these findings, two prototype products were developed and assessed by trained panels and residents in aged-care homes.

This presentation will share our fundamental research in the dysphagia space, market analysis of the aged-care sector, findings from an online survey of residential aged-care providers with regards to TMF and how these findings informed the development of two concept products. Sensory results from trained panels and consumer testing will also be shared. In this research we took a holistic approach of engaging all stakeholders involved in the manufacture, preparation and consumption of TMF to ensure that the solutions proposed had the potential to make a difference for Australia's growing aged population.

# LEADER IN CABLE AND CONNECTIVITY SOLUTIONS 

LAPP Australia provides a comprehensive range of German-engineered cables, connectors and accessories for the food and beverage industry, including Food Safe and Hygienic Design compliant products, and products resistant to typical food industry cleaning chemicals. LAPP's high performance, durable and reliable ranges are fully backed by local technical expertise and service.

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Proven all-weather control cables - resistant to a wide range of chemical media, available in screened \& unscreened versions

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Industrial halogen-free ethernet cable, verified up to 100 MHZ , for
flexible use with PUR sheath for use in harsh conditions
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Tuesday 12 October
13:30
Digital acceleration for an efficient, stable and resilient supply chain

Tuesday 12 October
14:30
Long-term benefits of hygienic equipment design

Karin Blacow, Intralox

Tuesday 12 October

## 15:30

F\&B costing practices that can turn market disruption into profit opportunities

Matthew Smith, 3C Software

## Wednesday 13 October

10:30
Less talk more implementation — advancing industry 4.0 in Australia

Harry Mulder, Beckhoff Automation Jozef Ceh, SMC Corporation ANZ
Richard Roberts, ZI-Argus
Wade Leslie, KUKA
Jim Wallace, Balluff
Max Jarmatz, NORD Drivesystems
Robert Prince, Balluff

Increasing consumer, customer and regulatory requirements, combined with a stronger focus on overall operational excellence, makes this the right time for a deep dive into the benefits of hygienic design for the food industry. CFS Food Safety Specialist Karin Blacow will guide you through how a proactive approach to hygienic design will positively impact production up-time, asset (preventive) maintenance, product quality, sanitation efficiency, environmental effects, etc and how hygienic design ultimately affects your business's long-term profitability.

Whether you're a protein processor handling disassembly costing, a consumer packaged goods company with multiple distribution centres or a beverage company with fluctuating ingredient prices, your understanding of costs and profits is critical to remaining competitive and successfully responding to change. Learn how leading F\&B companies have established robust product costing processes. By connecting their costs, from product-to-cost-to-serve, they now have visibility into overall costs and profit performance, providing rapid results and agility.

Open IIoT is an initiative of some of Australia's most prominent automation brands - SMC Corporation, Beckhoff Automation, NORD DRIVESYSTEMS, Balluff, ZI-Argus and its newest addition, KUKA Robot Automation. The group aims to cut through the jargon and help speed up the implementation of Industry 4.0. Join the panel for an open discussion on the 'how to'. There are no stupid questions and no matter where you are on your digital journey this session promises straight-talking answers to your questions.

Details correct at the time of printing.



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SAVE
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## Wednesday 13 October

11:30

## Future food production systems

Dr Tom Lewis, Stable Food Group
Jonty Barnett, Forager Food Co

A core driver for growth within the Australian food system will be development of new products and markets which deliver on food safety, taste and nutrition. Food system stakeholders must work together to understand and prioritise actions that will support sustainable, growth-focused initiatives.

The AIFST is pleased to present this session, which will provide an overview of recent developments in the area of shelf-stable foods: those that can be transported and stored independent of any cold chain logistics.

Microwave assisted thermal sterilisation (MATS), an exciting new food processing technology, promises to provide fresh-like meals which retain sensitive nutritional components, along with great flavour, texture and appearance. Tom Lewis will present on recent developments, including the first commercial production operation in India and opportunities to establish MATS co-manufacturing capability in Australia.
Freeze-drying technology is another stable food production platform experiencing a renaissance. Novel ingredients and processing technologies - like 3D printing - are leading to increased demand for a diverse range of high-quality freeze-dried ingredients and powders. Jonty Barnett will provide an update on the opportunities he sees as new production systems come online.

Attendees will have the opportunity to interact with speakers in a panel session Q\&A following the presentations.

## Wednesday 13 October

12:30
COVID recovery and the food industry

Deon Mahoney, PMA Australia-New Zealand

Fiona Fleming, AIFST
Sharon Natoli,
Food \& Nutrition Australia
Australia's food system encompasses agriculture through to manufacture, distribution, marketing, selling, consumption and disposal (and upcycling). 2020 was a year like no other - the impact of COVID-19 on the Australian economy and the Australian food system was significant. The adage of "never waste a crisis" is very relevant to the challenges facing Australia and the Australian food system with the pandemic providing a catalyst for change - to build the "next normal".
The AIFST is pleased to present this session, which will provide an overview of some key trends and opportunities for the food industry arising from COVID-19:

- Food safety as a priority - keeping the workers healthy and safe is critical while maintaining a high level of food safety and consumer confidence.
- Increasing health and wellness awareness - the impact of COVID-19 has led consumers to focus on their immune health.
- Consumer shopping and eating habits - ready meals, meal kits, meal delivery and dark or cloud kitchens.

Attendees will have the opportunity to interact with speakers in a panel session Q\&A following the presentations.

## Wednesday 13 October <br> 13:30

How to design and save food packaging to minimise waste

With one-third of the food produced in the world being wasted, now is the time to rethink your food packaging design to ensure that it also minimises food waste from paddock to plate. The AIP invites you to attend this session to learn why Save Food Packaging plays a very important role in the food waste discussion and what steps you can implement to make a difference.


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# Pouder induction, uetting and dispersion without agglomerates, dust and losses 

Dr Hans-Joachim Jacob

Hydrocolloids such as thickeners, stabilisers and proteins are shear sensitive. When mixed into liquids, agglomerates are initially created, which subsequently have to be broken down through dispersing. During dispersing the agglomerates, the polymer structure of the already hydrated gel is damaged. Viscosity and texture decrease irreversibly.

The solution to that problem is a technology, in which the primary particles of the hydrocolloid powders are separated by vacuum expansion before entering the liquid, are fully wetted upon first contact with the liquid and are then dispersed in situ under vacuum conditions and hydrated agglomerate-free under overpressure. The powder is immediately solubilised completely. No agglomerates are formed. There is no further dispersion required. The texture is not damaged.

The Conti-TDS powder wetting and dispersing machine differs from other systems on the market. Powder is inducted dust- and loss-free directly from bag, hopper, container, bigbag or silo into liquids and wetted and dispersed in seconds. The machine works according to the rotor/stator principle. It is installed outside the process tank and is connected to it like a pump. The machine recirculates the liquid in a loop with the tank. Because of the special geometry of the rotor, a
strong vacuum is created within the dispersing chamber. With this vacuum, powder is inducted directly from the powder container dust- and loss-free. The liquid stream is dispersed in the dispersing chamber with high shear. Under these conditions the surface of the liquid, into which the powder is inducted, is extremely enlarged.

Powder always contains air in the spaces between the particles. Air expands under vacuum. Because of the increasing vacuum on the way into the dispersing zone, the air between the particles expands. Therefore, the particles are released from each other. The wide distances enable an easy and complete wetting of every single particle. Powder and liquid enter the dispersing chamber via completely different paths and are only brought together in the dispersing zone at defined shearing gradients. There is no chance for an uncontrolled agglomerate formation. These are ideal conditions for wetting the individual particles. This process facilitates the fine distribution at the moment of wetting and ensures significantly better product properties compared to standard powder addition.

Depending on the recipe, several different raw materials can be dispersed consecutively and fully automatically, whereby the induction can be performed from different containers. After the induction of solids has been completed, additional dispersing

## STAND <br> NIR analyser

 R6Routine testing of meat products has been made easier utilising the DA6200 NIR Analyser Monitor incoming meats, in-process blends and finished products for fat, moisture and protein in seconds, not hours, like traditional chemical methods. The real-time results allow meat manufacturers to make on-the-go quality decisions to improve the consistency, quality and profit of finished products.

Supplied calibrated and ready to use, the lightweight, compact and battery-operated analyser can be used anywhere on the production floor or back in the in-house laboratory. The instrument uses robust solid-state diode-array NIR technology and has no moving optical components to help provide reliable operation, accurate measurements and optimal uptime. Using the magnetic coupled plastic cups allows a large representative sample of homogenised meat to be analysed easily.
Results for each chemical test are displayed on the screen of the DA6200 NIR Analyser without any further calculations to be carried out by the operator. The DA6200 NIR Analyser is a low-cost NIR instrument that has been approved by AUSMEAT for the determination of chemical lean in meat products.

## Australasian Medical \& Scientific Ltd <br> www.amsl.com.au



## Automated storage and retrieval systems

The Dematic Automated Storage and Retrieval Systems (AS/RSs) are designed to maximise pallet storage capacity, safety and operational resilience.

Suitable for manufacturing and distribution operations, Dematic's latest AS/RSs provide high storage capacity in a minimal building footprint, providing rapid access to pallets in a secured, high-density, energy-efficient storage system. Fully automated, they can provide maximum resilience for operations

High-density storage: the AS/RSs can increase storage density over traditional manual warehouses, handling loads of up to 1800 kg in a secured rack up to 42 m high. With single-, double- and multi-deep satellite storage options, the systems provide good space utilisation in ambient, chilled or freezer environments.

Fully automated with rapid throughput, the AS/RSs can achieve high throughput rates. Intelligent software and controls allow the systems to operate fully automated around the clock in a 'lights-out' environment.

The AS/RSs are designed for mission-critical applications requiring maximum reliability with easy maintenance and maximum uptime. The latest controls technology are designed to ensure high efficiency and accuracy.

## Dematic Pty Ltd

www.dematic.com.au

## Linerless label applicators

The Ravenwood NOBAC 5000 range of linerless label applicators is suitable for general food manufacturers, meat, seafood and smallgoods as well as fresh produce brand owners.

The NOBAC 5000 linerless label applicator is an inline machine, designed for maximum flexibility and ease of operation. Quick changeovers between wrap formats are achieved by eliminating the need to turn the packs. What's more, the range offers versatility in terms of label materials. These include board, paper and synthetic substrates. In addition to sleeving fixed weight products, there's the added benefit of linking the NOBAC 5000 to weigh scales. These scales allow for variable weight products as well as check weighing.

Printing at the point of application means that wasted printed labels on changeovers can be reduced. The Ravenwood NOBAC 5000 linerless label applicators integrate seamlessly with thermal transfer overprinters. The coders from Result Group complement its linerless label applicators, suiting all sizes of production lines. Even companies with multiple lines can benefit from printing at increased line speeds without missing a pack - regardless of throughput and pack size.

The range of linerless label applicators allows for the application of sleeves and labels in many different formats including: Top, Top and Side, C-wrap, D-wrap, Full Wrap, Skin Pack, Skin Pack Protruding and Super Protruding Skin Pack up to 100 mm above the height of the tray. It has also been developed to apply labels and slideable sleeves to ready-meal packs as well as linerless labels to fruits and continental smallgoods.

## Result Group



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E-mail: sales@tapflo.com.au


## Vibratory and feeders equipment for bulk materials

Eriez provides equipment and systems to increase the efficiency of a user's process - from the moment ingredients enter a plant to the time the end product ships. Its wide range of vibratory and feeder equipment is designed for the unique needs of the food processing and packaging industry.

With its totally enclosed patented magnetic drive, Light and Medium Electromagnetic Heavy Duty Feeders are suitable for feeding practically any bulk material — from micron size to bulk chunks. They feature solid state controls, which operate the feeders with 'watch like' precision.
Eriez has a complete line of vibratory products to convey, screen and feed materials in quantities ranging from a few spoonfuls to many tons per hour. The company can also develop and customise special units such as multiple drives, enclosed trays or screens to suit the user's applications.
Eriez Magnetics Pty Ltd
www.eriez.com.au

## Food and beverage business management solution

The Aptus Business Solutions Sage X3 is a business management solution designed to enable food and beverage organisations to grow, drive operational efficiencies and achieve competitive advantage.
Tailored to the specific requirements of the food and beverage industry, the Sage X3 solution includes
 capabilities such as financials, supply chain and production management. It is intuitive, scalable and can be used via cloud or on premises, on any device.
Forecasting is based on historical data, which can be used to help users save money and provide business intelligence that allows them to effectively predict seasonal changes.

The formula and recipe management feature can predict and optimise the yields of multiple outputs of a production job by comparing planned inputs to planned outputs and optimise a recipe or formula specification prior to initiating a production job.

The system allows users to maintain quality specifications and test results for raw materials, intermediates and finished goods throughout their life cycle.
Production planning and scheduling allows users to plan production runs around the availability of ingredients, scaling up or down to reflect constraints, compare loads on work centres imposed by existing and proposed work orders, and manage the load capacity of each work centre.

The inventory management feature is designed to eliminate inefficiencies and streamline a user's inventory with end-to-end warehouse management integration, reduce inventory write-offs with expiration date, use by date, or re-control date management.

The solution also features lot tracking and traceability.

## Aptus Business Solutions <br> www.aptusbusiness.com.au

Beamex MC6-T
New revolutionary temperature calibrator


The Beamex MC6-T is an extremely versatile portable automated temperature calibration system. It combines a state-of-the-art temperature dry-block with Beamex MC6 mulfifunction process calibrator and communicator technology.
With the ability to generate temperature as well as measure and simulate temperature and electrical signals, it offers a really unique combination of functionality. In addition to temperature calibration abilities, the MC6-T also offers electrical and pressure calibration capability, all in one device.
It offers versatility, that no other temperature calibrator can match.

AMS INSTRUMENTATION \& CALIBRATION PTY LTD

## Magnet emulsion technology

Using magnetic forces to continuously disperse ingredients, the M4E technology from Natec Network can provide a cost-effective method for creating stable emulsions and lump-free powder dispersions.

It works by combining turbulent flow conditions, inducing the LORENTZ force from a permanent magnetic field. This force intensifies the spinning and colliding effect of powder particles or oil droplets, resulting in particle deformation and break-up.
The technology is designed to improve not only efficiency but also product stability, with no separation or lumps, and increased gel viscosity or emulsion stability via a thorough, fast, single pass. By pumping liquid through the device, a vacuum is created (known as 'Venturi'). The vacuum causes the powder to aspire and move into the liquid phase. Once in contact with water or oil, powders tend to coagulate and create a lumpy consistency, but using the M4E technology, the mixture passes through the device creating consistently dissolved dispersions
Features include: simple, fast and efficient process; no moveable parts; good dispersion/emulsion with smaller particle size; no molecular breakdown; used for batch and/or continuous processes (depending application); permanent magnet - no electrical power needed; flexibility for a range of products with particulates up to $2-3 \mathrm{~mm}$ (without destroying them); no maintenance and easy to clean with CIP; and small footprint - easy to integrate.
Other benefits include: reduced energy costs/increased savings; higher yield/reduced raw material consumption such as thickeners (starches, hydrocolloids); and reduced production time.
The technology is suitable for emulsions and dispersions required in the food, cosmetics, healthcare and chemical industries. Foods that can benefit from the technology include: processed cheese, reconstituted cheese, vegan/analogue cheese; soups, sauces and dressings, mayonnaise; meat products; fruits and vegetables; baby food; specialty food, beverages; and pet food

The technology can be retrofitted to replace a shear pump, added to an existing line or included in a new line with a RotaTherm continuous cooker or ShearTherm batch cooker.

Gold Peg International Pty Ltd
www.natec-network.com/australia2021


## Tubular linear motor

Ballscrew actuation has been around for well over a century, and rack and pinion methods even longer. Both indirect drives have their place, and will be around for many years to come, but there are newer methods of creating linear motion.

Direct drive methods are predicted to continue growing in popularity, for reasons including accuracy, speed, safety and lower maintenance burdens on owners.

Both cylindrical linear motors and flatbed linear motors can have better accuracy and repeatability compared to ballscrew options. A tubular linear motor is also a simpler design, with only two moving parts (the shaft and forcer), and does not have to rely on intermediate components such as a gearbox to change torque. Ballscrew actuators are also sensitive to jerk and lack the nimbleness of tubular linear motors. The contact between the nut and screw means lubrication is essential and causes wear and performance degradation over time.
Like other tubular linear motors, ANCA Motion's LinX M-Series is designed to be close in form to ballscrew systems, offering easy substitution for those who want to make the change.
The M-Series has only one millimetre of air gap between the shaft and the forcer, which keeps a relaxed tolerance requirement.
Besides being wear-free due to the one-millimetre air gap, the M-Series offers peak resolution of 10 micrometres, peak velocity of 10 metres per second and a maximum acceleration of 30 Newtons.
It also overcomes the issue of backlash suffered by ballscrew actuators and has a failure rate under $0.03 \%$.
With no backlash, no wear, a high level of dynamism and low level of maintenance, the M-Series represents gains in manufacturing productivity.
ANCA Motion
motion.anca.com

## CASE STUDY

## Aerofloat showcases its food and beverage industry wastewater technology



Well known in the wastewater industry, Australian company Aerofloat can provide innovative wastewater treatment solutions for the food and beverage manufacturing sector the company has detailed two examples.

Innovation is at the heart of Aerofloat's technology. Manufacturing a dissolved air flotation (AeroDAF) system for Macadamias Australia inside a durable 20 -foot HQ shipping container allowed Aerofloat to minimise costs and installation time, while ensuring the system would withstand the harsh

Queensland climate. Coupled with a balance tank including pH correction, as well as air mixing and screening, the system allowed Macadamias Australia to remove suspended solids, reduce the BOD and correct pH to meet the local council's wastewater regulations.

Cupitt's Estate on the New South Wales south coast required a solution to successfully treat domestic sewage and wastewater from its brewery, cheese production and winery processes. Aerofloat's wastewater treatment design included sequence batch reactors (AeroSBRs) that applied Aerofloat's patented aeration system and unique ALS decanter. The system was fully automated and had remote monitoring capabilities to assist with system optimisation and diagnostics. The mixed waste from Cupitt's Estate was treated to a quality suitable for discharge to the surrounding terrain, meeting the strict regulations by local authorities.

Aerofloat's team of engineers will be onsite at foodpro 2021, in Sydney, on stand K8, to discuss wastewater issues and solutions for the food and beverage industry and showcase its patented technology.

Aerofloat (Australia) Pty Ltd
www.aerofloat.com.au

STAND

## Metal detector

OFI designs and locally manufactures the SHARK-BRC metal detector using the Germanengineered Shark series metal detector sensor head. Cassel-Inspection has developed the Shark series over the past 25 years and has one of the most advanced detection capability currently available.

The metal detector was developed to ensure users have the highest level of detection capability and safety while inspecting their products. The device complies with all food safety standards including HACCP and BRC compliance.

The unit is supplied with the following features as standard: fully enclosed inspection tunnel; failsafes to include reject verification, bin full, bin door open, pack block sensors, low air, rejecter fault, conveyor speed control and reject tracking; Intralox modular belting system, FDA compliant and heat resistant up to $120^{\circ} \mathrm{C}$; stainless steel design for washdown applications, including a large lockable bin with inspection window; and intuitive user interface with auto set-up, user log-in levels and data recording.

The metal detectors are manufactured in Melbourne and supported throughout Australia by OFI local service support teams.
OFI Weigh \& Inspection Solutions Pty Ltd
www.ofiinspection.com.au




Food allergens represent an ever-present risk for individuals with allergies. Using reliable and easy-to-use test kits to accurately detect potential allergen contaminations has become a critical necessity for food producers.
FMCG Industry Solutions offers a complete portfolio of allergen test kits for the qualitative (AgraStrip) and quantitative (AgraQuant) analysis of food allergens. These tests can be used for different applications and cover all steps in the food production process: testing of raw materials and finished food samples; analysis of rinse waters (as part of cleaning validation); and detection of allergens in environmental swab samples.
The allergen test kits contain everything users need to get started. The testing can be easily implemented into routine analysis as part of an allergen management plan. The simple test format makes it easy for a smooth workflow to be maintained on-site within a manufacturing environment as well as in the laboratory.

FMCG Industry Solutions Pty Ltd
www.fmcgis.com.au

## Water quality solutions

Waterform Technologies is an Australian family owned and operated water solution provider. The company has solutions to help all kinds of food, beverage and agribusiness clients solve water quality issues. The company knows that every site has different challenges, and no two water qualities are the same.
An example of a trade-waste solution: when a major dairy food processing client was experiencing repeated odour breaches from its trade-waste pH correction system, Waterform was asked to develop a solution to fix the problem once and for all. Firstly, a proper continuous flow complete mix and automated digital dosing system was designed along with a custom-built, enclosed 500,000 L tank. Within one week all odour issues had disappeared and the Water Authority in question was relieved to have a compliant system to audit.

An example of a solution for process line filter elements blocking up: Waterform's beverage bottling client was expending a large amount of money and time in constantly changing the cartridge-style filter elements on a product water line. Despite the water being from mains supply, the Silt Density Index (SDI) was still high. Waterform was able to design and install a custom ultrafiltration plant using mains water pressure with robust low-pressure membranes that came with a five-year guarantee for no fibre breakage.

## Waterform Technologies Pty Ltd

www.waterform.com.au

## Food-grade Iubricants

Pacific Lubrication Consultants (PLC) has been distributing CARGO Oil for more than 10 years throughout Australia.

CARGO Oil has been developing H 1 food-grade lubricants for over 40 years. The company has a dedicated food-grade product division, consisting of product development, manufacturing and blending, food safety and compliance, which has allowed it to stay at the forefront of the food industry needs, whether it be end user or OEM.

Its products are manufactured from high-quality synthetic base oils or highly refined paraffinic oil, along with the latest safety features like its AEROSOL range. This range features its new LUBE-SAFE food industry-specific, two-way actuator button, featuring dual spray pattern, large locked on actuator button and built-in straw aimed at reduc-
 ing the possibility of a mechanical contamination incident.

With a range of products designed to cover users' lubrication needs, all CARGO Oil products are manufactured to ISO 9001 standards and ISO 21469-specific requirements for the formulation, manufacture, use and handling of food-grade lubricants. The company is also certified with ISO 14001 environmental assurance.

The CARGO Oils food-grade lubricants are designed to improve food safety, brand protection, compliance and GMP on the user's site.

## Pacific Lubrication Consultants

www.pacificlubrication.com.au

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Register at foodproexh.com

The idea of using paper as a secondary packaging is not new; KHS first experimented with this around 20 years ago. Back then, this technology didn't catch on; however, as paper was a cost-intensive raw material and wrapping containers in film yielded better results, the beverage industry thus opted for different systems and solutions.

But in today's world, customers demand alternatives to the usual packaging systems such as film and these should be as eco-friendly as possible. To meet this demand, KHS Group has added a further environmentally friendly system to its portfolio. With its Innopack Kisters tray packers, the systems supplier now enables cans of food and beverage to be wrapped in paper. The new technology provides an alternative to shrink film or wraparound cartons. Regarding stability the results are the same, yet compared to cardboard, costs are lower as less energy and fewer materials are used. With a few minor adjustments existing machines can also be converted to this new set-up. This type of pack can replace shrink film or wraparound carton packaging for transportation or sale on packs of 12 or 24 cans in the high-capacity range of up to 90,000 cans per hour.

Wrapping cans in paper has many advantages over other materials:

- Paper is kinder to the environment than film with respect to ocean pollution, as paper biodegrades in the environment after a few weeks.
- Fewer packaging materials are used. Instead of a sturdy wraparound carton or film packs on trays, packaging cans in thinner paper only needs a flat, stable corrugated card pad as a base - with identical results regarding stability.
- Costs are cut by the new paper pack, compared to a wraparound carton, by up to $15 \%$, with outgoings about the same as for film. Overheads are also reduced by the low energy consumption of about 14 kWh an hour at 80 cycles a minute.
- Package hygiene and integrity is improved as the folding process is such that the pack is fully enclosed. In contrast, dirt can get into film packs with small side openings; paper full wrap has the advantage when it comes to protecting the cans from soiling.
- By adding secondary paper packaging, it is possible to reach out to new target groups at the point of sale with attractive product presentations. It is also possible to choose between printed or unprinted, new or recycled standard paper qualities as packaging material (usually $80 \mathrm{~g} / \mathrm{m}^{2}$ or $100 \mathrm{~g} / \mathrm{m}^{2}$ ).


In order to wrap cans in paper instead of film just a few adjustments are needed to the Innopack Kisters tray packer. KHS Group is increasingly supplying modular systems and solutions that enable and ease the appropriate conversions of machines. In this case, KHS has simply re-engineered the process module for folding and wrapping. The standard components such as tray separation from the magazine, gluing or can feed are identical to KHS machines already on the market. This allows beverage producers to have the tray packers already in operation at their plants converted simply by adapting certain modules, making a full new investment unnecessary.

## KHS Pacific Pty Ltd

www.khs.com


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## Visit STAND H6 to find out more

## Australis Engineering acquires Precision Stainless Systems

Brisbane-based Precision Stainless Systems has been purchased by Australis Engineering. The acquisition adds to the Australis Group of engineering and conveyor-related businesses, co-owned by Sydney-based brothers Peter and Anthony Gustafson and their parents.

Precision Stainless Systems specialises in the steel fabrication of conveyors, machinery and equipment for food and beverage manufacturers and non-food FMCG goods such as pharmaceuticals, healthcare, batteries, pet foods and chemicals.

Founded in 1996 by partners Trevor Higgins and Jeff Graham, the company manufactures high-quality equipment, especially in the meat, raw foods and beverage sectors. The company proudly supports the made in Australia philosophy, with all its machinery manufactured at its facility in Darra, Brisbane.

The company will now be part of the Australis Group, which includes: Australis Engineering with its conveyors, pallet handling and robotics and automation capabilities; Profilium with its t-slot aluminium profiles and linear guides and with representation in Sydney and Melbourne; and Advance Conveyors which specialises in conveyor systems, in particular roller conveyors and roller conveyor components.


Australis Managing Director Peter Gustafson said the opportunity to purchase Precision was too good to pass up. He said the company's good reputation in the fresh meat and food sectors means they have seen outstanding results over a long period of time. The company's Queensland presence, coupled with its strong conveyor expertise, meant that it has strong synergies with the other businesses in the Australis Group.

The Precision, Australis and Advance businesses will operate independently but
synergistically. The addition of Precision will allow for a greater push into the fresh food market, especially in the meat and abattoir sectors.

Australis plans to keep the Brisbane manufacturing facility operating as usual, and will retain all Precision Stainless Systems employees. Gustafson will become Group Managing Director with recruitment underway for a new GM and former owners will remain in the business until December 2021 to ensure an effective handover.


## PFAS-free and compostable paper packaging materials

The Sustain Paper PFAS-free and compostable paper packaging materials are designed to provide a safer choice for Australian businesses. There can be no compromise when it comes to customer safety with food packaging.

The Sustain Paper range of PFAS-free, compostable and biodegradable flexible paper-packaging materials has a broad range of applications. The range is suitable for grease and moisture proofing packaged foods, baking and heat-sealable foods for delivery bags.

The range includes Nature and Barrier packaging materials.

## Sustain Paper

www.sustainpaper.com.au

# Boost your plant's productivity and profit 6 ways with a Flexicon ${ }^{*}$ conveyor 



1<br>Convey Almost Anything

FLEXICON ${ }^{\circledR}$ Flexible Screw Conveyors move free-flowing and non-freeflowing materials, from sub-micron powders to large pellets, including products that pack, cake, seize, fluidise, abrade or smear, with no separation of blends.

## 4 <br> End Contamination <br> Fully enclosed, it

 prevents spillage, dust and contamination of your product and plant environment. The tube's removable end cap allows evacuation of material and in-place flushing with air, water or steam, or rapid removal of the screw with no tools.Fit Any Layout
You can route the flexible conveyor vertically, horizontally or at any angle, over or under obstructions, through small holes in walls or ceilings. Mobile units serve multiple functions and require minimal floor space.

3<br>Cut Maintenance<br>The rugged inner spiral is the only moving part contacting the material and is driven beyond the discharge point, preventing material contact with seals or bearings, minimising wear and maintenance.

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STAND
Automatic case packing system
The patent-pending Proseal CP3 high-speed, fully-automatic case packing system is designed to complement the Proseal range of tray sealing machines to provide a complete primary and transit packing solution. The case packer combines efficient power consumption and a compact footprint with the ability to fill cases at up to 120 packs $/ \mathrm{min}$.

It features the ProMotion tray infeed system, which maximises throughput by following motion and intelligent buffering technology to effectively control the flow of trays, enabling them to feed continuously in the case packer without stopping.

Suitable for a variety of pack formats, including trays, pots and sandwich packs, it is also suitable for materials such as A-PET, C-PET and board. Auto tool technology enables fast and easy format changes, while quick-release (QR) conveyors allow swift removal and replacement to speed up and simplify cleaning and maintenance.

The case packer features the same high levels of construction and durability as Proseal's tray sealers and incorporates many of its features. These include the ProTect user login and audit trail security system, and full compatibility with the ProVision OEE and downtime analyser that delivers a real-time view of machine performance. Set-up and daily operation are simplified thanks to the user-friendly menu-driven control panel with step-by-step prompts, error and status displays, and batch pack counter.
Options include additional crate fill and increased length of buffering conveyor for higher speeds. Crate delivery and discharge conveyors can be bespoke designed to individual factory layouts and the CP3 can be fully integrated with complementary equipment such as case erectors, existing create delivery systems, labellers and coders.



## Personalised foods for specific consumer segments

CSIRO is using its expertise in science and innovation to create personalised foods for specific consumer segments

For children, for example, it has developed Taste \& Learn, a novel curriculum-aligned program for primary schools that focuses on the enjoyment and fun of vegetables. Tested extensively by students and educators, the program is available for download by schools for free.

With aged-care providers and others CSIRO is working to understand issues with texture-modified foods and developing products with improved quality and taste for elderly populations

Its in-home sensory toolbox allows faster and cheaper collection of sensory and flavour measures from consumers to help companies design food products based on consumers sensory preferences.

## CSIRO

https://research.csiro.au/taste-and-learn/



Want the latest information on instrumentation to ensure food safety, improve processes and reduced operational costs? Come speak to us at FoodPro 2021. Endress+Hauser will be exhibiting with our partner Rockwell Automation at Booth K14.

## 5G, to be <br> That is the question, but what are the evolving connectivity options for robotic solutions?



Typical system structure of a food and beverage system with PROFINET connection lines (orange).

Typical factory buildings and process and packaging facilities now contain various drive and robot systems that transfer workpieces from one process step to another while ensuring precise connectivity to ensure that they are precisely processed.

Stable and reliable response time without high latency is essential for controlling the measurement system, sensor or grippers on the last axis, the so-called end-of-arm tools, as well as for synchronisation and communication between the robots.

According to cables and connectivity company LAPP, ensuring optimum connectivity can ideally involve a combination of wired and wireless communication.
"These days the end-of-arm tool is connected using cable-based data communication such as digital I/O, I/O link or Industrial Ethernet (PROFINET). However, a combination of wired and
wireless communication can be useful under certain circumstances," said LAPP Australia General Manager Simon Pullinger.
"The choice of wired and wireless depends very much on the application. It is often not so much a case of one or the other, but rather choosing the most effective and flexible combination to ideally meet present needs and prepare for evolving technology," Pullinger said.
Three reasons for the use of wireless technologies

1. The wear on the data network cables in their composite dress packs is high, with high dynamics and due to ever-increasing work spaces required for the robots. This increases the risk of the systems failing.
2. Small batch sizes and frequent conversion require flexible communication concepts that enable the components to communicate with one another in almost real time.
3. The elimination of data cables in the dress pack reduces the weight and allows the robot to move more dynamically.

## What 5 G has to do to replace data cables

- The control signals must reach end-of-arm tools such as a gripper in real time. It does not have to be at rest - Remote IO is wirelessly connected to the controller.
- The required latency of $4-8 \mathrm{~ms}$ must be complied with. This will be feasible using 5 G in the future. To put it in context, today's WLAN systems are limited to 10 ms .
Possible localisation of the gripper to up to $\pm 0.5 \mathrm{~mm}$ is not yet possible with 5G, said Pullinger.

LAPP Australia has been established to deliver its resources, expertise and German standards to Australia to help prepare diverse industries for a future in which they will use technology to compete cost-efficiently. The company provides integrated systems which comply with the leading Australian, European and American compliance and quality standards.
LAPP Australia Pty Ltd
lappaustralia.com.au


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STAND Z22

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FLUID CONTROL SYSTEMS


## Secondary packaging machine

The Innopack Kisters Wrap-aroundShrinkPaperPacker Advanced (WSPP A) is capable of processing with three different types of secondary packaging: wrap-around cartons, where the pack is enclosed in cardboard; trays with or without a paper or shrink film wrapping; and cardboard pads wrapped in paper or shrink film.

The machine can package cylindrical containers including beverage cans - that have a compact shape and even surface to make them suitable for wrapping in paper. The modular design of all Innopack Kisters Advanced packaging machines enables an existing Innopack Kisters Wrap-aroundShrinkPacker (WSP) or Innopack Kisters Wrap-aroundPaperPacker (WPP) to be retrofitted as a WSPP A.
In the new folding module, folding tools tightly fold and erect the paper around the sides of the packs with precision. The separate KHS InnoHotMelt applicator with its needle valves ensures the glue application.

An optional automatic glue pellet feed system is also available for uninterrupted production. In the setting unit of this module the glued side flaps are pressed onto the pack and fixed by foam-coated application belts.

If paper is used in place of film, the machine conveys the finished packs through the shrink tunnel that has been switched off. If paper wrapping is to replace film packaging entirely, the shrink tunnel can be completely removed.
KHS Pacific Pty Ltd

## www.khs.com

## Heat exchanger design software

Software for the design of shell and tube heat exchangers has been further enhanced after its first update introduced

. 2000 different fluids, meaing that key system is its database of 2000 different fluids, meaning that key property parameters are available to users without the need to look things up outside of the system. In January 2021, a new AHED system update introduced another database in the form of the Tube Assistant.

Updated versions of AHED now feature a 'magic wand' symbol in the geometry section of the program. Clicking on this opens the Tube Assistant feature, which contains details of different tube dimensions, including those commonly used for heat exchangers, as well as standard ISO, ANSI and millimetre metric tube types. Fields in the table correspond to a specific tube outer diameter and wall thickness. Selecting the appropriate field then allocates these dimensions to the shell, inner tube or nozzle in the current AHED project as required.


[^1]
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## Oval suction plate

Schmalz has added an oval suction plate with a size of $180 \times 90 \mathrm{~mm}$ to its SAOF series
The suction plate can be combined with the vacuum tube lifters JumboFlex and JumboFlex High-Stack for workpieces weighing up to 50 kg . The suction plates in the SAOF series are made from wear-resistant nitrile rubber (NBR) and are suitable for the workpiece surfaces to be handled.

It can also be added to Schmalz's modular system, allowing the user to configure double- or even four-head suction grippers.

## Schmalz Australia Pty Ltd <br> www.schmalz.com



## Food processing gloves

iSense nitrile gloves are now designed to be softer, higher quality and more comfortable for people who work with their hands every day.
The food processing gloves feature a soft blue nitrile that creates a comfortable sensory experience for the user. The soft nitrile material is gentle on the skin minimising the risk of an allergic reaction and the highly elastic blend technology enables the user to don the glove easily and smoothly without tearing.

The nitrile gloves feature micro-texture on the fingertips to enhance the wearer's grip and feel.

Specifically designed for the food processing industry, the nitrile material used in the gloves is claimed to be one of the strongest blue nitrile gloves crafted for high-risk situations to ensure food safety is not compromised.
Other features include: HACCP International food safe certified; compliant to Australian Regulatory Standards; available in four sizes and part numbers S: 230001, M: 230002, L: 230003, XL: 230004

## The Glove Company Pty Ltd <br> www.theglovecompany.com.au

## Meat processor costing solutions

Given the unique challenges meat processors face around costing, BMA Group has created a dedicated resource specific to the meat and livestock industry on costing and profitability technology, solutions and the ImpactECS platform - the site is now live and can be accessed at: https://bma.com au/meat/costing-solutions/.

The site has a range of content and resources for meat processors, such as profitability insights, short videos addressing solutions to the challenges around costing webinar recordings; industry case studies; and a product costing evaluation tool. It aims to be informative in a clear and easily accessible way. The company plans to keep updating content on the site while still keeping it relevant and specific to the industry.

ImpactECS is a cost and profitability system designed for food and beverage manufacturers. Suitable for meat processors, the system is also specifically designed to handle that kind of disassembly process.
Matthew Smith, President and CEO of $3 C$ Software, will be presenting at foodpro 2021 on $F \mathscr{B}$ costing practices that can turn market disruptions into profit opportunities

BMA Group
bma.com.au



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# Qld abattoir to install Dematic automation solution 

Australian family-owned meat processor John Dee needed to streamline operations in subzero conditions to meet the growing customer demand, so they called Dematic to find a solution. Now, work has begun at the Queensland abattoir to install Dematic's Multishuttle Meat Buffer Storage and Handling System.

With the help of project partner Wiley, John Dee is implementing the Dematic automated solution to optimise facility operations and provide better workplace safety by overcoming the challenges associated with working in harsh
 temperatures. The solution is
purpose-designed to enable John Dee to scale up and increase its premium beef export market share.

John Dee owner John Hart said the Warwick facility supplies thousands of varieties of beef cuts to more than 145 customers in over 37 export markets, and those numbers are only growing.
"Our recent expansion of our Warwick facility is the largest single investment in the company's 80 -year history and supports our business growth and competitiveness during a time when beef exports are rising significantly."

Based on Dematic's Multishuttle Automated Storage and Retrieval System (AS/RS), the solution has been deployed by meat processors in refrigerated environments worldwide. It provides companies like John Dee with a range of advantages over post-production manual distribution and despatch, with multiple aisles accommodating for both chilled and frozen environments with the flexibility to cater for any future temperature changes required by different markets. These features are beneficial when exporting products from frozen and chilled storage environments for markets where the cold
supply chain is anticipated to mature and expand over the next few years, particularly in export markets such as China, Vietnam and greater Southeast Asia.
"In selecting Dematic for this project, we were able to ensure that we were working with a system that was able to adapt and cater for the future growth of John Dee, with the ability to increase productivity to match significant surges in demand, whilst also providing improved worker safety," said Rob Barron, Wiley CEO.

The four-aisle, 30-level solution automatically stores product cartons coming out of production and builds and sequences the cartons for manual and automated palletisation and direct container loading. This greatly improves operational efficiency, productivity, transparency and order precision, and addresses the needs of an increasingly complex supply chain. Two aisles manage products chilled to $-1^{\circ} \mathrm{C}$ and the other two manage products frozen at $-20^{\circ} \mathrm{C}$, which reduces reliance on staff to build and lift heavy cartons in these harsh environments.

The solution includes a frozen aisle that John Dee can switch to chilled in response to anticipated future growths and advancements in cold supply chain export markets across Asia.
"Our advanced Multishuttle system provides a high-performance, accurate, safe and cost-effective automated order fulfilment and despatch processing solution for Australia's meat industry, and we are very excited to see John Dee reaping the many benefits at their Warwick facility," said Soeren Schauki, Business Development Manager at Dematic.

Dematic Pty Ltd
www.dematic.com.au

## Cold Storage Range

## 



The A-SAFE Cold Storage range has been meticulously engineered to provide the highest levels of protection to pedestrians, assets and infrastructure. From the robust rack protection of RackGuard, to PAS 13 compliant fork protection, bollards, barriers and height restrictors, the Cold Storage range offers a full suite of high-performance safety products for applications within very low-temperature environments. Food-safe, robust and effective to $-30^{\circ} \mathrm{C}$, Cold Storage products from A-SAFE have been purposedesigned for use in frozen food storage facilities and other challenging sub-zero environments. Benefit from the ultimate in low-temperature performance and reduced maintenance costs without compromising on hygiene.


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## Zippers for flexible packaging

With the development of eco-friendly and heat-sensitive films, Zip-Pak has now introduced a range of Soft Crush zipper options suitable to be used with such flexible packaging structures.

Zip-Pak Soft-Crush zippers are designed to achieve highquality seals and appearance, with lower time-and-temperature application. The zippers can improve converting efficiency while minimising sealing gaps and distortion on heat-sensitive films and pouches.

With the drive towards a circular economy and consumer and industry interest growing for eco-friendly mono-material PE film and pouches, Soft-Crush reclosure zippers are also designed for recyclability and well placed to meet the needs of these structures.

The Soft-Crush range of zippers is now available in several existing zipper reclosure styles and sizes. This approach means that these solutions can be incorporated seamlessly into existing machinery with minor or no modifications.

Providing environmental, operational and pack presentation benefits, the zipper range is suitable for brand owner manufacturing and applying a reclose zipper to flexible package inline or a convertor manufacturing premade pouches with a reclosure feature

## Zip-Pak Pty Ltd

www.zippak.com


## Ventilated pallet wrapping solution

Omni Group has released the VentX Unico sustainable ventilated pallet wrapping solution. The award-winning and patented innovation is designed to ensure optimum load ventilation and containment while reducing plastic and costs

The Omni Pallet Wrappers can be fitted with the VentX Unico Ropers, which are used to dispense VentX Unico Film. As a result, the solution can ensure reduced pallet wrapping costs by halving film usage, reduce load damaged and help the environment.

Benefits include: reduce plastic usage and wrapping cost significantly; save on energy consumption and electricity costs in chill rooms; flexibility to customise and control load ventilation and load containment; avoid product damage by allowing loads to breathe; no loose tails to meet strict supermarket guidelines for palletised loads; and lower environmental impact with less plastic usage.

Omni Group can also provide pallet wrapping audits to demonstrate results

## Omni Group

omnigroup.com.au


## Particle size analysers for wet and dry samples

Particle size in foodstuff influences many aspects of the production process, ie, transport, storage or shelf life, but did you know it also has a major influence on organoleptic properties, such as taste and mouthfeel?

Laser diffraction is based on the observation that the angle of light diffracted by a particle bears a direct correspondence to its size. With its ability to measure both liquid and dry dispersions, from nanometre-to-millimetre sizes, the Particle Size Analyser (PSA) from Anton Paar is suitable for applications in production manufacturing and quality control.

The PSA is claimed to be the only instrument with integrated liquid and dry dispersion modules. This is designed to save users time and eliminate module changes, laser realignment and operator errors.

The product comes with a 3-year warranty, local technical and service support.

## Anton Paar Australia Pty Ltd

www.anton-paar.com/au-en/


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Our in depth knowlegdge of the food processing environment gives us the edge and is our real point of difference. Starting with processing techniques, through raw material/ingredients, machinery selection/ installation, project management, product development, implementation and training.

vakona

SCHRÖDER

MAJA derinding, defatting, membrane skinning, flake ice machines ASTECH automatic bandsaw, portion cutting KOLBE bandsaws, mixing/grinding, grinding TREIF slicing, dicing, portion cutting SCHRÖDER injecting, brine mixing, massaging
REX vacuum filling, auto linkers, mince lines, forming attachments STEPHAN cutting, mixing, emulsifying LORENZO BARROSO clippers
VAKONA vacuum, massaging, tumbling, mixing, marinating REICH smoke houses, ovens, fermentation rooms, water cookers BOSS vacuum packing, dip tanks, auto packing lines

## Food-grade tubing element

The launch of the Maxthane pump tubing elements and confirmation of FDA and EC1935/2004 certification on Qdos pumps is designed to enhance Watson-Marlow Fluid Technology Group (WMFTG)'s pump solution offering to food and beverage sector.

Designed to suit tasks that include the accurate and reliable dosing of flavours, colours and additives, the tubing provides food-grade compliance in accordance with FDA regulations 21CFR177.1680, EC1935/2004, EU regulation 10/2011.

Fully compatible with all types of food oils and most CIP (clean-in-place) chemicals, it is manufactured from fully recyclable thermoplastic polyurethane. Of particular note is the tubing's high peristaltic performance from a thinner wall
 and recyclable constitution that reduces the product's environmental impact.

Designed for use with the Watson-Marlow 530 Series cased peristaltic pumps fitted with a 520 RET pump head, the tubing can provide benefits such as high accuracy, as well as rapid, simple maintenance. The Quick-change LoadSure (three sizes) options ensure easy changeover. During maintenance routines, the operator simply replaces the element in the pump head.

The tubing supports flow rates up to $3.5 \mathrm{~L} / \mathrm{min}$ and pressure up to 7 bar to deliver dosing and metering accuracy for a wide range of applications.
Other features include extended service life, broad chemical compatibility, low spallation, and good abrasion and UV resistance.
The company's Qdos pumps also now carry the certification required for use in food and beverage processing applications: EC1935/2004, EU regulation 10/2011; and FDA regulation 21CFR parts 170-199.

Offering high accuracy (20,000:1 turndown ratio and linear $\pm 1 \%$ accuracy) Qdos pumps provide a value-based solution in dosing and metering applications such as water conditioning and vitamin addition, or viscosity modifiers. $\pm 0.5 \%$ repeatability further helps to maintain continuous product consistency.
Watson-Marlow Fluid Technology Group
www.wmftg.com.au


## De-pack, crush and melt (remelt) frozen

 fruit juiceFollowing a difficult year, HRS Heat Exchangers is delighted to be able to confirm its attendance at the foodpro event at the - Sydney Olympic Park in October 2021. Among the products that HRS will showcase is its new I Series, which offers to ? de-pack, crush and melt (remelt) frozen fruit juice for the manufacture of high-quality not-from-concentrate (NFC) products.
The HRS I Series consists of two elements, the IC Series which de-packs and crushes frozen products from lined 200 L drums and the IM series which melts the frozen product.
The IC Series features a roller conveyor which feeds individual drums into a tipper that empties them into the crusher. Here, a specially designed spiked roller crushes the solid ice into an icy slush, which is then transferred to the IM Series re-melting device.

Based on the tubular heat exchanger technology for which HRS is renowned, the IM Series raises the temperature of the juice from frozen to around $4^{\circ} \mathrm{C}$ in 90 s . From here, the cold liquid juice can be pumped to a bespoke holding tank, or straight into the next process step.

The I Series can handle up to 60 drums $(12,000 \mathrm{~L})$ of frozen product per hour and can also be combined with HRS's existing range of fruit juice processing machinery for pasteurisation or filling.
HRS Heat Exchangers Australia New Zealand
www.hrs-heatexchangers.com/au/

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Get in touch with us to explore our range of food analysis instruments and learn how they can help you deliver high-quality, safe and reliable food products to your customers.



McCormick has unveiled its Flavour Forecast, revealing the latest global trends in flavours and ingredients in food products over the past year.

This year's four flavour trends move plants further into the spotlight; invite comforting global flavours to the table in approachable ways; dive deep into the fresh, undiscovered ingredients and textures of the coast; and reignite our health and wellness focus through the re-emergence of mindful eating and intentional ingredients based on ancient philosophy.

1. Plants pushing boundaries represents how the plantbased world is now mainstream and has developed into a culinary trend that honours vegetables, fruits and botanicals that deliver indulgence, brilliant colour, hearty texture and delightful sensation through flora-focused eating. Some of the key flavours in this space include ube (purple yam), Szechuan buttons (edible flower buds) and trumpet mushrooms.
2. Humble nosh is inspired by the Yiddish word 'nashn' meaning to nibble on, this trend combines rising global flavours with the means to 'travel locally' via our plates. Key flavours include chaat masala (Indian spice blend), pandan kaya (Malaysian jam) and crisped chilies.
3. Underwater, under discovered is a trend that takes flavours from the coasts to kitchens, delving into less explored ingredients and textures from fresh and salt water like seaweeds and algae for culinary innovation. Key flavours include dulse (red sea lettuce flakes), spirulina (blue-green algae) and sea grapes (soft, green algae).
4. Physiological eating trend represents the re-emergence of mindfulness and intention, inspired by ancient practices and beliefs for mind-body balance, a sense of harmony, growth and self-love. It also focuses on the Ayurvedic practice, which uses six tastes (sweet, sour, salty, bitter, astringent and pungent) to achieve balance, and warming and cooling techniques to provide comfort to the body. Key flavours include coriander, lemon, sea salt, cumin, turmeric and ginger.


STAND ( $)$

## Compact automatic slicer

With the release of the StartUp line, CBS Foodtech has taken up the latest slicing technology from TREIF.
The Divider StartUp compact slicer can provide fully featured slicing options like shingle, stacking and staggered stacks all on the one unit.

With an intuitive touch screen the operators can easily navigate to all the stored programs and make adjustments during production without any issues.

The unit can be fully washed down and sanitised, offering high hygiene standards and disassembly all without the use of specialised tools.

It can slice a wide range of products from cooked products like hams and bacons, to cured meats - salami and prosciutto, as well as tempered fresh meats like shabu shabu. All this is made possible due to its patented cutting system and orbital blade. A large cutting window of $280 \times 160 \mathrm{~mm}$ and an infeed length of 600 mm makes the unit suitable for a wide range of applications.
With its compact design and integral wheels, the unit can easily be pushed in and out of production areas as required, making it a flexible all-rounder for many slicing tasks.

## CBS Foodtech

www.cbsfoodtech.com.au



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## STAND



# AIFST 2O己l Convention Food Science: Delivering in the changing world 

## 11-12 October 2021 I Novotel, Sydney Olympic Park I Book tickets at: www.aifst.asn.au

The Australian Institute of Food Science AIFST 2021 is running concurrently with the four-day foodpro 2021 event. Over two days with plenary and four concurrent session streams, the convention will feature more than 60 scientific and food industry speakers from home and abroad. Food safety features strongly, including key areas of microbiological safety, allergens and traceability systems. Advances in nutrition, sensory and consumer science will be presented, including personalised nutrition and new opportunities at the interface of food science with each of these disciplines.

The sustainability and resilience of food systems will be examined through contrasting lenses that represent different points along the food supply chain. These include new and emerging food crops, cellular agriculture, fermentation systems, waste valorisation, packaging technologies and case studies in innovative processing.

Social events also make a return - the Wine \& Cheese Tasting, Young Professionals Networking breakfast and AIFST Fellows breakfast are planned to be held at this year's convention.


## Rotary pouch fillers

The Rotary Pouch Fillers supplied by ADM Packaging Automation offer high-speed pouch filling. The systems range from six to 10 stations and come in simplex or duplex models to reach speeds of up to 80 ppm . Designed for a fast changeover for various-sized pouches, changes can be made within minutes to reduce downtime and increase productivity.

The Rotary Premade Pouch Packaging Machines can be used to fill liquids, pastes, granules and dry powdered products whether users are a small entry-level company or a large corporation. And they are suitable for the food, pharmaceutical, cosmetic, pet food, confectionery, agriculture and chemical industries.

The components use technology from manufacturers such as LG or Allen Bradley PLCs and servos, SMC and Festo pneumatics, Omron temperature controllers and Schneider switches. The rotary pouch fillers also meet international standards and regulations.

## ADM Packaging Automation

www.admpa.com.au


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## Automation at Asahi's DC achieves results worth raising a beer to.

When consolidating its multiple Brisbane sites into the new Heathwood DC, Asahi made the decision to upgrade from previously very labour-intensive operations to a fully automated warehouse solution, eliminating manual handling of pallets.

With the introduction of a satellite ASRS solution, Dematic helped Asahi maximise storage capacity, reduce operating costs, and improve efficiency and productivity to better meet the needs of its customers.

Read more and watch the video at Dematic.com/asahi

## Bank-mounted water aerator

A bank-mounted Venturi-aerator is a device used to mix and aerate tanks, ponds and lagoons. The VenturiAerator is used in conjunction with a self-priming pump to draw water from the source, aerate and pump back into the lagoon, basin or tank

Venturi-aerators are as effective as traditional surface aerators. Because all equipment is mounted on the banks of lagoons or adjacent to tanks, the requirements for row-boats or cranes is eliminated, making it safer, easier and more cost-effective to own, operate and maintain.

Oxygen is transferred at good SOTE, combined with reduced maintenance costs.
Mixing and destratification is controlled by the positioning of the suction and discharge of the pump. Water can be drawn from anywhere and any depth of the tank or lagoon, and can be discharged anywhere at any depth.

Applications include: odour control, sludge digestion, wastewater aeration, lake destratification, septage treatment and many others.
These aeration units are used in conjunction with Gorman-Rupp self-priming centrifugal pumps to deliver solutions with the following advantages: simple, uncomplicated design; easy to install; high SOTR (standard oxygen transfer rate); easy to maintain; low cost of ownership; and safe for operators.
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https://www.munters.com/en/industries/food--beverage/?country=AU

## Chr. Hansen acquires natural colour provider

EQT portfolio company Chr. Hansen Natural Colors has announced it has integrated SECNA Natural Ingredients Group into its portfolio.

It is the first major transaction for the firm, which has an industry focus towards natural colours, after becoming a standalone company.

The company said the investment strengthens its position by giving it access to SECNA Groups' strong pigment portfolio, which notably includes anthocyanins from black carrots and grape, and caramel.
"We're committed to continuing to find new ways to harness and share the power of nature's true colours. This is the first of many exciting milestones for us as a standalone company," said Odd Erik Hansen, CEO, Chr. Hansen Natural Colors.
"We look to enhance our value proposition and strengthen our operational platform together with the team at SECNA at a time when demand for naturally sourced colours is increasing."

SECNA Group CEO Gabriel Muñoz said the partnership is the ideal opportunity to join forces with a like-minded, established industry leader.
"It's a win-win situation as Chr. Hansen Natural Colors will add our strong pigment offerings in anthocyanins and caramel to their collection, while providing our valued customers and suppliers with access to their portfolio, technologies and market reach, which is the most extensive in the industry."
"The combination of our colour platforms puts us in a prime position to better serve the market and our customers, and we're looking forward to welcoming SECNA Groups' 100 employees to the Chr. Hansen Natural Colors team," said Klaus Bjerrum, COO, Chr. Hansen Natural Colors.

## Oterra

oterra.com

Celebrating 90 years of Keith Harris' local knowledge and global reach creating bespoke and trend based solutions across taste, scent, formative and functional ingredients.


## Reduce time and resources in your CIP Process

The Liquitrend QMW43 has been designed to optimise the clean-in-place process by reducing the time and resources consumption at each cycle. The innovative, smart sensor from Endress+Hauser can measure the build-up and the conductivity in pipes and tanks, saving time by reducing manual inspections and cleaning cycles (which often includes safety margins due to critical installation points where the cleaning is challenging).
The use of flush installation and stainless steel (316L) replicates the same condition as the inner side of pipes and tanks and provides an effective figure about the build-up before and after the cleaning. This allows
 users to ensure that each cycle is never started too late or ended too soon by detecting even the thinnest layer of remaining product.

The device can also help to improve product quality by identifying not only chemicals but also distinguishing different products inside pipes without the need for visual inspections or lab analysis, preventing incorrect mixing and contamination.

The device offers analog outputs and IO-Link communication to allow complete documentation and traceability of the cleaning process, compliance with food safety standards, and full monitoring and control of cleaning operations.
Endress + Hauser Australia Pty Ltd
www.au.endress.com

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Shrink, stretch and flow wrapping systems


Australian Wrapping Company will be showcasing at foodpro a variety of shrink, stretch and flow wrapping systems for various industries, including food processing and warehousing.
This year on display is the Smipack XP650 ALX-T fully automatic shrink wrapping system with tray forming and insertion. The system collates products into rows and automatically forms a tray before the pack is overlapped in shrink film for the shrink process to start. The finished product is well protected for transportation and distribution. Smipack Overlap systems deliver production rates up to 25 packs/min with various models available depending on product requirements.
TLM Flow Wrappers exhibited will be the Wiki and Futura. Both have a compact design and features including no product no bag. Suitable for food processors, the TLM range accommodates clear and printed films with optimum product rates and retail appeal for packaged items.

PKG Pallet Wrappers include economic systems for low outputs up to fully automatic systems with top cover applicators and conveyors. E-Motion pallet wrappers provide a space-saving and efficient method of wrapping standard and over-sized pallets. Many options are available for the PKG Pallet Wrapping Systems.

## Australian Wrapping Company Pty Ltd

www.austwrappingco.com.au


## Cable and connector solutions

The LAPP Australia ROBUST series of cable and connector solutions for power, control, data transmission, bus, sensor and Ethernet connections are suited to a wide range of harsh environments, including those encountered in food and beverage applications.
The products are certified to be suitable for wet cleaning in the food and beverage industry in accordance with ECOLAB, European and North American standards. In contact with hot steam, the products are claimed to have a service life 10 times greater than normal rubber or polyurethane sheathed cable.

The series features three German-engineered brands.
The ÖLFLEX ROBUST is an all-weather control cable with strong chemical resistance. The cables are suitable for a wide range of temperatures ( -50 up to $+80^{\circ} \mathrm{C}$ ) and are detergent and hot-water resistant for use in food and beverage applications.

The UNITRONIC ROBUST is a halogen-free data transmission cable with colour coding according to DIN 47100 and resistance to a wide range of chemical media. It extends LAPP's range of low-frequency data network cables with a cable featuring a special resistant sheath material for use in particularly harsh environments. It is EN50396 and HD 605 S2 compliant and suitable for temperatures from -50 up to $+90^{\circ} \mathrm{C}$.

The ETHERLINE ROBUST is an industrial Ethernet cable with good chemical resistance. It is suitable for temperatures from -50 up to $+80^{\circ} \mathrm{C}$ and can be used in PROFINET applications. It is also available with a special TPE jacket for rough environments.

## LAPP Australia Pty Ltd

lappaustralia.com.au

## Foodcare meters for pH Analysis

 with Application Specific Probe

Hanna food quality pH meters are rugged and portable with the performance and features of a benchtop. Five models are available in this series to measure food, milk, meat, yogurt and cheese. Each model is supplied in a durable thermoformed carrying case that holds the meter, probe, cleaning solutions and calibration buffers securely in place.

# Milk company installs stormwater standby pump solution 


in conjunction with series/ parallel piping. This is a special piping arrangement that enables each pump to operate independently at each station, allowing pumps to alternate between cycles. When a single pump at any station cannot keep pace with the inflow, the second pump starts up in series with the running pump. This means that both pumps are working together to overcome friction losses in the discharge line instead of against each other. This enabled the use of much smaller motors and smaller power cables, and the need for VFDs was eliminated.

Solids handling was another consideration, as all manner of debris can be washed into the stormwater

A Victorian milk company needed a stormwater pumping system that required pumping from three separate locations back to the one point, pumping eventually through a common discharge line.

As each pump station could pump at different times, and with differing flow rates from each, several things needed to be considered. This included VFDs, motor sizes, pumps 'fighting' with each other for space in the common discharge line, and not overperforming when one pump at one station could be the only one operating in the system.

The company went to Hydro Innovations for an engineered solution. Until that point, the popular option given by most other companies was to supply pumps with large motors to enable them to run at faster speeds to produce the required pressure when all pumps at all stations needed to operate and pump into the same common discharge line. Because the system was being set up as a standby, all six pumps were required to have large motors. This meant that power needed to be provided to these satellite spots to accommodate these larger motors.

According to Hydro Innovations, this was a costly solution, with large motors, large power cables and high energy costs.

Hydro Innovations suggested the use of Gorman-Rupp self-priming pumps
 ral common hand toos to operational efficiency.

The self-priming pump system was installed with Hydro Innovations designing and building the pump systems with its special piping and valve arrangements.

According to Hydro Innovations, the milk company saved money on capital set-up and enjoys the ongoing energy and low-maintenance cost savings
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# $\rho$ 

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## Automated microbial testing platform

Neogen has introduced its next generation SolerisNG automated microbial testing platform for fast and reliable detection of microorganisms
Maintaining all the best features, benefits and ease of use of its previous platforms, the SolerisNG has enhanced software capabilities that allow users to access a complete audit trail, export to LIMS and generate automated CofA.
The heart of the system is its ready-touse culture media vials. The vial technology measures microbial growth by monitoring pH changes and other biochemical reactions.
Available assays include: TVC, Yeasts \& Mould, Coliform, E. coli, Enterobacteriaceae, Alicyclobacillus, Gram Negative, Lactic Acid, Staphylococcus, Pseudomonas, Orange Serum Broth and Preservative Efficacy Testing.

Other features include: simple protocol, easy workflow: using optical technology that combines simple methodology and classic microbiology, the platform can provide accurate, reproducible detection of a variety of microorganisms, via its ready-to-use media vials; reduced testing time: versus traditional methods, the platform has quicker time to results in as little as 14-18 hours, and earlier release can also extend shelf life and product value; improved efficiency: with earlier alerts of contamination, corrective actions can be implemented immediately reducing waste and increasing throughput; Reduced labour and materials: testing vials are supplied fully ready to use, simply inoculate the vial with sample and place into the SolerisNG instrument for analysis; and non-destructive test: following testing, the sample can then be used for further sample analysis and organism confirmation.

## Neogen

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# Converting waste streams into revenue streams <br> Exploring the alchemy of added value 

Professor David Bradley, Academia \& Collaborations Manager, SAJK, Agilent Technologies

## Reduce. Reuse. Recycle.

For decades, an expanding global population and its growing dependence on durable goods, packaging and other consumerrelated materials have made these three words a rallying cry as well as an effective action plan - for addressing ever larger and more unmanageable amounts of waste.

But when it comes to dealing with food waste, the picture is more complicated. 'Reduce’ remains a fundamental strategy, one that's making great strides in addressing food waste around the world. But what about reuse and recycle? When the waste you're dealing with is non-durable organic matter, things get trickier.

Agilent Technologies, a recognised world leader in analytical solutions across multiple disciplines, has teamed up with Professor Vincent Bulone at the University of Adelaide and partners at the Research Consortium for Agricultural Product Development (RC-APD) to look at ways to introduce a fourth ' $R$ ' into the mix: Reimagine.

## Partners in discovery

Through the recently established analytical platform Adelaide Glycomics, these groups are working together to turn a creative eye toward a specific type of waste - agricultural waste - by asking a fundamental question: Are there valuable substances
within that waste that are just waiting to be identified, extracted and put to good use?

Agricultural waste is an enormous problem, one that impacts our society on multiple levels. The volumes of agricultural waste continue to increase, largely because of the stringent criteria imposed by retailers for produce appearance (in addition to the impact of environmental factors) - even while malnutrition remains a serious problem in our society. ${ }^{1}$ However, the magnitude of the problem is mirrored by the magnitude of the opportunity; such a huge amount of waste material stands poised as an exploitable resource of industry-altering proportions.

Modern analytical and discovery technologies are ideal for tapping into the potential of that resource. Using similar approaches to those employed to identify genes that promote cell differentiation toward plant seed development, the Adelaide Glycomics-led team seeks to identify genes and characterise the metabolic pathways involved in the biosynthesis of bioactive compounds from various crops.

A number of these compounds are known, but many are largely commercially available only as synthetic alternatives. Other compounds with potentially unique properties no doubt await discovery and characterisation. The knowledge gained


$(-4) 4$


through these efforts will be exploited for the conversion of agricultural waste into products with significant added value, opening up new revenue streams for farmers and others in the food/agriculture sphere.

Central to this project is the industry PhD (iPhD) project, established by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) of Australia with the goal of extending high-calibre PhD candidates the opportunity to deliver real-world solutions across industry, applied research and academia for the benefit of society. ${ }^{2}$ Through Adelaide Glycomics, Agilent Technologies provides an iPhD student with access to technology and other financial and in-kind support, including analytical instruments and training that are fundamental to the effort.

From Agilent's perspective, this is a 'multiple-win' opportunity. There are so many positives that can come out of partnerships such as this, even beyond the stated goal of addressing the very pressing issue of waste. More broadly, it's a great chance to support the food and agriculture industries as they tackle problems that are central to their continued viability. At the same time, Agilent is able to contribute in the development of the next generation of scientists, and if successful, help nudge the needle of sustainability into a better place.

Essential guidance for these efforts comes from Professor Vincent Bulone, Director of Adelaide Glycomics and professor at the University of Adelaide School of Agriculture, Food and Wine. Through Adelaide Glycomics in particular, Professor Bulone is uniquely positioned to oversee the convergence of the strengths of the various partners toward addressing the multifaceted issue of agricultural food waste. "Our projects largely aim to exploit

scientific knowledge and discovery to benefit the growers associated with our Research Centre," said Professor Bulone. "We use our knowledge to find practical solutions for the management of agricultural waste and the conversion of biomass into products with a higher value; in other words, we use science to turn waste into profit, and solve issues that are unsustainable in modern agriculture. Key products of interest include bioactives with antioxidant properties, which find use in skincare products. We are also looking at carbohydrate polymers to produce high-strength composite materials to replace petroleum-derived plastics, as well as a number of food supplements with healthpromoting activities."

## Potential targets, potential gains

Early work has focused on exploring the potential for extracting high-value compounds, including colouring and flavouring agents and novel complex glycans, from apples and cherries, both of which are easily damaged and have potentially short shelf life. Presently, much of the waste from these crops is returned to the earth - composted, buried or simply left to rot where it falls - with none of the costs invested in their production having been recouped as revenue.

However, flavonoids present in cherries, apples and other crops could prove to be extremely valuable, with commercially available synthetic versions sometimes costing many thousands of dollars (USD) per gram. ${ }^{3}$ Known compounds such as this represent 'low-hanging fruit' as targets for extraction and commercialisation. Other possible targets, including a number of carbohydrate polymers, await further characterisation of their properties and modification for optimisation toward specific applications. Still other targets no doubt await discovery.

Another example of potential value involves starch from (for example) downgraded potatoes, which can be used for the production of bioplastics and functional foods with health benefits, by exploiting the properties of the so-called resistant starches. ${ }^{4}$ These resources also offer utility in the creation of functional materials, following derivatisation of the starch polymers. In addition, proteins from potatoes and polyphenolic compounds with biological activity, such as antioxidant or antimicrobial activity, are present and can be recovered. ${ }^{5,6}$

However, doing so economically requires careful thinking, as some of these compounds are naturally present in low abundance. Still, these efforts remain driven by the
goal of using as close to $100 \%$ of the waste as possible, by generating a range of products derived from multiple individual components that are sequentially extracted. In this way, profit can be made both from major compounds such as starch, and from less abundant but highly valuable bioactives such as polyphenols.

## A new alchemy for a new challenge

Unlike the alchemy of old, there's no Philosopher's Stone that can magically transform these waste products into revenuegenerating materials. Accomplishing this feat takes the right mix of perseverance, strong science and cutting-edge tools.

As a researcher on the front line of this quest, iPhD candidate Daniel James Clayton-Cuch finds the work isn't short of challenges - or satisfaction. "Agricultural waste is an important problem in Australia, but of course, it isn't a uniquely Australian issue. And while Australia's geography adds its own layer of complexity, and perhaps a different sort of urgency, it's rewarding to think the work we're doing here might become an important part of much larger efforts."

As for the work itself, Clayton-Cuch added, "It's really a unique opportunity to be part of a program that has such broad support from leaders in so many areas. Being the beneficiary of this confluence of expertise, experience and technology is really an ideal environment for growing as a scientist."

At Adelaide Glycomics, PhD students like Daniel ClaytonCuch and other young researchers are encouraged to focus their efforts on three essential facets of the agricultural waste issue: the development of new technology in collaboration with Agilent Technologies, the discovery of new bioactive and structural compounds with potential applications relevant to a multitude of sectors, and the thorough assessment of the properties of natural compounds and their derivatives.

These activities are more essential today than ever before. Converting waste into gold while developing new green technologies and products addresses a fundamental issue facing modern society. The process also helps ensure that future R\&D leaders are trained to bring new ideas and innovation to sectors that are predicted to continue to grow.
finds-produce-problem
[2] https://www.csiro.au/en/Careers/Studentships/Industry-PhD
[3] https://www.scbt.com/browse/chemicals-Other-Chemicals-flavonoids/_/N-vxw660
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## Integrated solution for dairy sector

Tetra Pak's UHT 2.0 heating portfolio, combined with Tetra Pak E3/Speed Hyper, is designed to provide sustainability benefits, cutting GHG emissions and water usage while reducing operational costs by up to $30 \%$.

The integrated solution can reduce water and steam consumption, creating less wastewater and therefore also lowering the cost of its removal for dairy manufacturers.

Adding a Tetra Pak Water Filtering Station to Tetra Pak E3/Speed Hyper can also help to recover 5500 L of water per filling machine running hour (up to $95 \%$ ), while contributing to lower water consumption.

Suitable for portion package production, the aseptic carton filling machine produces up to 40,000 portion packs/h, using eBeam sterilisation technology to complete the task.


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## Modified atmosphere packaging gas (MAP) equipment

The global drive for a healthier diet changes in consumer lifestyles and the advancements of retail marketing have led to an increase in the demand for fresh, healthy, preservative-free and convenient food produce. Delivering on this expectation, while at the same time extending the shelf life of produce so that it can remain on sale longer, becomes possible with the use of modified atmosphere packaging gases (MAP). Other benefits of MAP include the minimisation of wastage and product returns, extending the reach of product distribution channels and increased trust in a brand.

Niche Gas Products (NGP) has been supplying the Australian food manufacturing industry with MAP gas equipment by WITT for over 20 years It can help users from concept to installation with equipment that mixes, analyses and detects MAP gases. From improved gas use efficiencies through to quality assurance, the company understands food businesses. From a large multinational to a boutique producer, the company can tailor a suitable solution to match a user's requirements and budget.

## Niche Gas Products <br> www.nichegas.com.au

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Product packaging supplier Result Group has announced it has partnered with global smart packaging solutions provider Talkin' Things.

The companies hope the move will provide brand protection to millions of Australian products; help brands deliver personalised consumer experiences; and provide benefits to the logistics industry.

Result Group said the partnership enables the development of manufactured RFID inlays that meet industry standards for low-frequency, high-frequency (NFC) and ultrahigh-frequency (RAIN RFID) at a price level previously unavailable in Australia.
"The cost to implement an RFID/NFC system has traditionally been very high," said Michael Dossor, Group General Manager at Result Group. "However, Result Group is offering a smart packaging system solution at a price level unseen yet in Australia, and we have a succinct plan in place to further reduce costs by 2025."


The Talkin' Things suite of RFID and NFC solutions help users track and provide visibility to transform the physical to digital, creating the data streams companies need to simplify operations, know more about their businesses and empower their mobile workforces. The benefits for using RFID in logistics are numerous, and scanning and inventory control is said to be much faster with RFID than with other forms of management.

Dossor said RFID technology allows the brand owner to obtain real-time information about the products and assets in their entire supply chain.
"Retailers or manufacturers that have complex processes around product shipments, product receiving and product storage in warehouses can use RFID technology to locate, identify and track these products automatically, without requiring manual intervention. This potentially creates significant value in the supply chain."

RFID can offers several advantages over barcodes. It can identify goods individually with a unique code, whereas barcodes can only identify product categories. Unlike barcodes, which must be read with a scanner pointed directly at the code, an RFID reader can pick up serial numbers from a distance - up to six metres away in some instances. It can read hundreds of codes in seconds, while barcodes must be scanned individually. It can also reduce the labour costs associated with reading barcodes.
"We are delighted to partner with Result Group in this unique market. Our partnership will offer a distinct advantage with high-quality RFID products to all our Australian customers. We will make sure that due to this collaboration more Australian companies will be introduced to the benefits of RFID technology and be well advised in the implementation of the right products," said Marcin Pilarz, CEO of Talkin' Things.

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## Automated hand washing stations

Effective and consistent hand hygiene in the food and beverage processing sector is critical to safe food outcomes and has always been one of the top priorities of food industry quality or production professionals.

There is a great deal of documented studies and papers in relation to 'best practice' methods for cleaning hands. Much of this has not changed for many years. Clean hands have always relied on the individual taking appropriate care and time, to ensure a hygienic outcome.
Meritech, a US-based company specialising in automated hand washing systems, has taken the subjective nature out of washing hands, with its range of CleanTech Automated Handwashing Stations. This technology is designed to improve hand washing, reducing the time it takes, uses less water, with compliance tracking and ensures $100 \%$ consistent wash outcomes among staff. Validated to remove $99.9 \%$ of harmful pathogens, including COVID-19, the hand wash stations are FDA approved and fully validated.
The user of the system simply inserts their hands into the two openings on the CleanTech Hand Wash machines. The hand wash system starts automatically and runs for 12 s . Then the user simply remove their hands to dry them accordingly.
Meritech has partnered with distribution partner W R \& D Wells in Australia and Wells Hygiene, in NZ. Wells can be contacted on +61 396998999 (AUS) or +64 9263 9332, or email info@wrdwells.com.au or sales@wellshygiene.co.nz.

## WR\&D Wells Pty Ltd

www.wrdwells.com



## Hygienic cable gland range

The SKINTOP HYGIENIC range from integrated cable and connection solutions provider LAPP has been specifically designed to meet the stringent global requirements of hygienic design, including following the general design principles of DIN EN 1672-2 in Germany and compliance with ECOLAB in America as well as EHEDG in Europe. Made from stainless steel, the range is suitable for direct contact with foodstuffs in production. All cable glands in the range have a smooth, rounded shape with no corners or angles - which is designed to prevent bacteria or microorganisms from settling and accumulating.
Additionally, the cable glands are comprised of stainless steel class V4A, to ensure long-term resistance to demanding ambient conditions.
All sealing materials are food-safe and a special elastomer is used on the range's seals, which provides high strain relief on the cable.
The range has ECOLAB certification, which demonstrates its durability against widely used cleaning agents, helping ensure that washdown and cleaning procedures will not impact the product's integrity and hygiene standards.
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## Small food company saves with digital automation

For nearly 20 years, Sydney company Bowles Veal Glaze, part of TRE Food Productions, has been producing quality cooking stocks that are the foundation of quality sauces and dishes used in many restaurants in Australia.

Over time, the business expanded its range of stocks and sauces to include a chicken jus, a lamb jus and a red wine jus, as well as keeping its traditional favourite veal glaze product.

## Old, noisy equipment a burden

Having been in operation for so long, Bowles was running its food production operations on 18 -year-old machinery. Besides the fact the system was close to breaking after its long run, other problems were beginning to present themselves. A large part of the existing system ran on compressed air, and noise and running cost factors were beginning to become a sore point.
"Bowles' production facilities are situated in a residential area, and the noise of running the compressor every five minutes to open the valves was getting too much," said Binh Pham, Director. "We obviously did things to try and bring that down - we brought in a big air holding tank - but at the end of the day, there was just too much ongoing noise from the compressor.
"The problem was that much of the equipment, including the air compressor, was outside. It meant the neighbours had to put up with it running all night, and we knew how loud an air compressor could be."

The precision of the machinery was also proving to be an issue. Running on air, rather than electricity, it was not easy to accurately control how much pressure was going through the valves each time. And although the system had served them well, it was nearing the end of its life.
"Back in the day when we first got the system, it was probably amazing. But it started to have issues because of the amount of workload we had put it through, and with the age it was, it was starting to fail in little aspects of the cooking," said Pham. "We also thought we should look into bringing down the cost of running the air."

## Digitalisation offers an affordable path forward

Bowles approached Bürkert, a company that has been in the industry since 1946, specialising in the measurement and control of liquid and gas systems.

Bürkert analysed the equipment, including the means and costs for automating - easing the road for Bowles to digitalise. In order to meet Pham's goals, Bürkert offered an all-electric solution that met all of the necessary safety aspects of the application, including hygienic and HACCP requirements. The system offered full automation and monitoring using a colour touch HMI, replacing the buttons and switches of the old system.

One of the problems facing small-to-medium enterprises in the food industry is that the cost of automation can be seen to be more of a stumbling block than it is for the larger food manufacturing companies. However, Bürkert was able to provide a solution that was a worthwhile investment for Bowles, saving the company money over the near term.


"When the package came back, we realised that it was very feasible to go completely electric and eliminate the noisy compressor. The resulting savings in running costs was going to pay off the cost of buying and installing the equipment three-fold over a five-year period," said Pham.

The Bürkert solution included its Type 3003 motorised actuators, Type 3361 electric 2-way ball valves, a Type 8137 radar level sensor, and two RTD temperature sensors. The ball valves control and regulate the main steam supply to the system while the motorised actuators provide on/ off control to each of the cooking vessel's heating coils. The RTD temperature sensors monitor the overall product temperature, while the radar sensor is used to maintain the optimum water level in the vessel during the cooking process.

Riding out the pandemic
But then there were other setbacks. Pham had just purchased the new equipment when the COVID-19 pandemic hit. $>$

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"COVID-19 whacked us a big one, you know," said Pham. "We produce products for restaurants, catering and airlines, and many of those looked like closing their doors."

Pham sat on the equipment, riding out the transition period, before returning with Bürkert to complete the automation.
"When we saw we would be OK and that we were still going to survive we decided to go ahead with the installation," he said.

## Easy installation lowers costs further

During the process, Bowles hired its own electrical contractor, and with Bürkert's expertise and guidance, the machinery was able to be set up efficiently.
"Nelson Chymiak, National Engineering Manager for Bürkert, came out and met our electricians on site. He ran them through everything and if they had any questions Nelson would come out or be able to fix it on the phone," he added.

Another problem Bowles faced with its old system was the cost of parts replacement and lack of technical expertise on such an old system.
"This new system is easy for replacing parts - if something does breaks down, you don't need a degree to go and fix it yourself," said Pham. "The cost-saving in that alone is brilliant because you can order the part, they'll have it to you that day if not the next morning, and then you can just replace it yourself."


The new system has also given Bowles scalability it didn't have before.
"Let's say in the future we want to add more kettles. With the new system we will be able to add screens onto that one system, and you can just add instead of rebuilding," he said.

## Looking forward

With this new system, Pham sees a bright feature for Bowles despite its main customers being halted by COVID-19.
"I see the future going forward with ease. We know what we can build up now, and we don't need to ever re-invest more money into setting up different systems for different applications," he said. "We can just use the open digital system we have and control it from there."

## Burkert Fluid Control Systems <br> www.burkert.com.au

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For investors, these ventures are de-risked by the clear path to scale and market that the industry founder brings. This model is designed to assist in building the new, transformational industries required to feed a growing global population and catalyse the innovation and commercialisation partnerships required between CSIRO and industry to meet that challenge.

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Eriez magnet/detector system rejects metal contamination in one pass.

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The liquid Line Magnet/Detector provides a single solution to foreign metal contamination and is available in a variety of sizes.

Eriez Magnetics Pty Ltd
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## Bead mill homogeniser

Food testing for pesticides, herbicides, mycotoxins, vitamins and other common residues routinely requires the homogenisation of the food matrix prior to solid phase extraction. This step produces a sample of uniform consistency, high surface area and easy accessibility for extraction of the required analytes.

The Biotage Lysera is specifically designed for the grinding, lysing and homogenisation of biological samples prior to any form of sample extraction. Using sample tubes pre-filled with a variety of beads, the Lysera vigorously and uniformly shakes the tubes providing an efficient, consistent and quality homogenisation usually in less than 40 seconds.

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## IoT temperature monitoring app

Modern food safety and quality assurance documentation is slowly moving away from paper-based to digitally based systems, typically hosted in the cloud.
Instrumentation specialist Butler Techsense has partnered with European manufacturer JRI to provide a complete digital cloud-based i temperature monitoring and recording solution for food production and foodservice companies.

MyFoodCheck is a mobile app that automates manual food temperature recording using a handheld thermometer proactively detecting temperature excursions at each stage of the food production process. During the receipt of goods, storage, cooking, hot and cold storage, and cook-chill production, the app pulls all this recording documentation under one shared database.

The application works in conjunction with a Bluetooth-connected thermometer and pushes the temperature measurements directly to the application via the operator's tablet or smartphone. The app is available free on Google Play and will soon be released on Apple iTunes, allowing users both Android and Apple platforms.

MyFoodCheck is used in conjunction with the JRI MySirius monitoring platform which automatically carries out 24/7 recording and alarming of fridges, freezers, cool rooms and ovens using the latest loT devices. MyFoodCheck is a free app and MySirius is a subscription-based solution. Users can choose between three plans depending on the number of devices and features required.

## Butler Techsense

www.butlertechsense.com.au

# Homogeneous and modular conveyor belting for direct food contact 

BMA Belting's collaboration with world class manufacturers Volta Belting Technology and Modutech Modular Belting provides the most comprehensive range of customised hygienic light weight belting for Australia's processed food industry.



Volta's patented sprocket driven Superdrive and DualDrive designs incorporates strict hygienic standards with minimal maintenance and running costs, making it the most ideal option for all unpackaged food processing conveyors.
Volta's Metal Detectable range of positive driven hygienic belting and weldable profiles bring a new level of confidence to Food Manufactures and the peace of mind that foreign objects from their belting assets will not make it into finished products.
Modutech offer combinable modular belting designs, materials, and accessories with the advantages of resilience in difficult environments, sterilisation, low maintenance and easy installation. The belts are secured with full- length hinge rods and driven through plastic sprockets and come in a range of pitches and durability.

All products are fabricated or assembled in Australia; proudly Australian owned for over 35 years!


BELTING AUSTRALIA

## Increasing children's vegetable intake and supply chain initiatives

Thanks to funding from Hort Innovation, CSIRO has brought together researchers from Flinders University and Nutrition Australia to deliver an integrated national approach to improving Australian children's vegetable consumption, through education of children, training for educators and engagement with industry.

With the goal of increasing children's vegetable intake, the VegKIT project has mapped out two initiatives that involve the industry supply chain
 and early primary school settings.

The initiative is developing new 'vegetable products' with sensory properties that are regarded as 'desirable’ for children. These new vegetable food product concepts will be driven by sensory science and take into account children's sensory preferences, knowledge about liking of vegetables and theories about food preference development.

It's also creating opportunities in primary schools to improve vegetable consumption through analysis of canteen menus, interviews with canteen managers and intervention to determine whether increasing the availability and type of vegetable products on the canteen menu will increase students' actual vegetable consumption.

## CSIRO

www.csiro.au

## ONE Broth ONEPlate Solutions Test With Confidence

NEOGEN ${ }^{\circledR}$ has developed an innovative workflow solution for the detection of pathogens in food and environmental samples, using just one enrichment broth and one agar plate. Ideal for laboratories looking to reduce time to result whilst still maintaining classical microbiology, with results in as little as 48 hours.
Validated according to ISO 16140-6 for Bruker MALDI-ToF confirmation.

FoodSafetyAU@neogen.com

## Hygienic foodgrade electrical enclosures

IP69K hygienic food-grade electrical enclosures are designed to prevent contamination and are suitable for the food and beverage, dairy, pharmaceutical and other industries that require high hygiene standards.

A full range of wall-mounted electrical enclosures and floor-standing electrical cabinets is available. In compliance with the EHEDG guidelines, they incorporate a sloping roof and a food-grade blue silicone seal

They are certified to IP66 and IP69K (EN62208, EN/AS60529, ISO20653, UL508A, EHEDG, RoHS).

A range of IP69K terminal boxes and pushbutton enclosures is also available.

## TRO Pacific

www.ipenclosures.com.au


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## Lemon myrtle hydrosol

This lemon myrtle hydrosol is derived from the essential oil distillation process of specifically bred, Australian native lemon myrtle cultivars. The leaves and stems are distilled within hours of harvest to preserve the iconic aroma and prized functional benefits.

Hydrosol is the aromatic water produced during the essential oil distilling process of the lemon myrtle leaves and stems and provides a gentler version of the potent aroma and health and functional benefits that are present in the pure essential oil, making it suitable for undiluted applications.

The aroma of lemon myrtle hydrosol combined with natural functional benefits makes it a suitable ingredient and substitute for water in indulgent perfumes, toners, soaps, hand sanitisers, body lotions, hair care, home fragrance and household cleaning products.

## Australian Native Products

www.australiannativeproducts.com.au

Total moisture analysis
AquaLab 3 is the latest instrument in METER FOODS' AquaLab range and offers 60 s Total Moisture readings, as well as cloud-based nontamperable data storage and reporting.
AquaLab 3's rapid 60 s Total Moisture analysis reports both water activity and moisture content results, allowing users control of product quality and production efficiency in their manufacturing processes, even for products containing volatile compounds. Production issues such as low yield, batch rework, overpackaging, slow product release cycles and process variability can often be improved through fast accurate moisture measurement as well as quality issues such as undesired textures, moisture migration and mould or microbial growth.
The device also comes connected to METER's Skala platform, offering all the benefits of secure and untamperable data storage, easy reporting and management of multiple devices across multiple sites. Legacy AquaLab instruments can also be connected to the platform to realise these same benefits.

It is distributed exclusively in Australia by Graintec Scientific.

## Graintec Scientific

www.graintec.com.au

## CLEANTECH® Fully Automated Handwashing Stations

## Automatic titrator

The latest edition to the Metrohm range of analytical instruments for titration is the Eco Titrator.

The device is designed with everything that users need to make titration analysis easy and convenient. Users simply select the required titration method, enter the sample size and press the start button. The Eco Titrator performs the analysis fully automatically.

Key features include: compact, robust titrator; high precision results; convenient, intuitive operation; GLPcompliant reporting and documentation; service and support from leaders in titration; six product versions (Basic, Acid/base, Salt, Oil, Redox and Biogas); Swiss-made; and users can save up to 120 titration methods on one device.

The compact Eco Titrator with integrated magnetic stirrer and touch-sensitive user interface is suitable for routine analysis. It provides GLP-compliant results with minimum space requirements at all times (approx. DIN A4).

The Eco Titrator Salt plus offers users the complete package for the analysis of chloride in a wide variety of samples. The package contains a titrator, a 10 mL cylinder unit and an Ag Titrode, and a maintenance-free electrode for precipitation titration with silver nitrate.
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## Data capture, management and reporting software platform

InformationLeader is a web-based data capture, management and reporting software platform. Developed as a true paper replacement, the platform allows organisations to capture, analyse and centrally manage traditionally paper-based information in a secure digital environment

InformationLeader consolidates paper and software-based business information into a single system, while maintaining full auditability and compliance with national and international regulatory requirements. The platform is suitable for use in the food industry due to its robust traceability features, including fully versioned records and change history. InformationLeader has been used in meat processing and export, dairy, poultry, fresh produce, baked goods, ready-to-eat meals, grain production and seafood.

Smart, fully customisable electronic templates with traceable workflow ensure that the right information gets to the right people, all while maintaining complete auditability. InformationLeader's companion app InformationM8 allows users to gather data remotely, in both offline and online environments on iOS and Android devices. Users can fill out forms while not connected to the internet using InformationM8, and when the app is next online it will upload the completed forms to InformationLeader. Reporting and dashboarding capabilities provide total platform visibility, and together with intelligent automation practices, make certain all key stakeholders are kept informed.

Each InformationLeader implementation is tailored to an organisation's specific workflows and procedures and can scale to match business growth. Past implementations have focused on quality assurance and compliance, health and safety, environmental management, administration and training, and hazard analysis and threat assessment.

Theta Technologies Pty Ltd<br>www.thetatechnologies.com.au




## Metal-detectable safety knife

The SECUNORM Profi40 MDP is a metal-detectable safety knife with a large cutting depth and
 stainless-steel blade. Its handle is made of rustproof, paint-free aluminium to prevent contamination from rust or chipped paint entering the production process.

High-quality metal-detectable plastic is used for the knife's inner parts, which, even in the minutest of particles, can be found by in-house detectors, and visual sighting is made easier with the plastic's distinctive blue colour

The GS-certified knife is equipped with automatic blade retraction; the blade instantly retracts into the handle as soon as it leaves the cutting material, the user just removes their thumb from the slider after starting to cut.

With a 36 mm cutting depth, the Profi40 MDP Part Number: 11900771 is suitable for a range of industrial cutting applications to safely and efficiently cut multi-ply cardboard, plastic strapping bands, film and bagged goods, as well as thicker materials like foam or polystyrene.
Martor Australia
www.martoraustralia.com.au


## Oxygen absorbers

The 504 Oxygen Absorber is a multipurpose iron-based oxygen absorber. It is non-toxic, food-safe and eliminates the oxidation of food, thereby maintaining the product's freshness and preventing the growth of microbes. The 504 Oxygen Absorber contains iron powder, active carbon powder, salt, diatomite granule and water.
It is particularly suited to food storage, packaging and preservation, including for high fat and water content foods such as pastries, cakes, wraps, dehydrated and smoked meat, as well as dried grains, pet food, vegetables, rice and pasta.
Using oxygen absorbers for food preservation is designed to reduce or eliminate the need for other preservatives, keeping food as clean and organic as possible and free from artificial preservatives.
The 504 Oxygen Absorber is available in 30, 50, 100, 200 and 500 cc sachets.

## Protection Experts Australia

www.pro-ex.com.au

## Lemon myrtle dried leaf

Lemon Myrtle Dried Leaf is produced from specifically bred, Australian native lemon myrtle cultivars. The lemon myrtle leaf is dried and processed within hours of harvest to preserve its aroma and functional benefits

This versatile native Australian flavour can be used as a substitute for lemon, lime or lemongrass flavouring, added to sweet and savoury recipes, infused in hot or cold herbal teas, blended into a savoury spice rub, sprinkled on top of desserts or added as a key botanical in distilled spirits.

Described as 'lemonier than lemon',
lemon myrtle has a sweet, yet spicy flavour with intense, yet refreshing citrus notes. The plant's sweet citrus aroma comes from its natural compounds - citral, citronellal and linalool

Lemon myrtle dried leaf is available in 6, 2 and 1.6 mm cut sizes to suit a wide variety of applications.
Australian Native Products

www.australiannativeproducts.com.au

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 in motionaustraliseng.com.au


## Differential pressure instruments

Endress+Hauser's Cerabar and Deltabar differential pressure instruments come with a Bluetooth interface for easier operation and improved efficiency in regulatory control, safety and other systems.
Heartbeat Technology creates the data basis for predictive maintenance and allows the instruments' functionality to be verified without process interruption.

Operation is provided via the SmartBlue app, which includes guided operating sequences for parameterisation and commissioning of the pressure sensor, bridging distances of up to $50^{\prime}$. Measuring points that are difficult to reach or in hazardous areas can be maintained, even if they are only integrated into the process via a 4-20 mA interface.

Real-time data from the pressure transmitter is available without the need for permits to open the housing or for safety equipment to reach the instrument.

## Endress +Hauser Australia Pty Ltd

www.au.endress.com


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- Ideal DAF sludge and scum transfer



# Proseal's tray sealing machines all good with Chefgood 

Tray sealing technology producer Proseal has announced it is supporting the continuing expansion of Chefgood - an Australian producer of home-delivery ready meals.

Two Proseal GT0e tray sealing machines have been installed at the Chefgood factory in Moorabbin, Victoria, replacing the company's original tray sealer from another supplier.

According to Proseal, the machines have enabled Chefgood to achieve greater throughput, handling around 35,000 trays every week.

The Proseal GT0e has the flexibility to perform any type of heat seal to a pre-formed tray, including atmospheric, modified atmosphere packaging (MAP), Vacuum MAP, Skin, Skin Plus and Skin Deep, and can handle all the latest tray formats and materials. Proseal Australia's local manufacturing of tooling

means the company is able to respond quickly to requests for new sets to meet changes in market demands.

Another benefit of the Proseal GT0e and all of the company's tray sealing machines is that features can be added or removed as required. This offers users futureproofing with the ability to adapt to new packaging trends. Equally essential, machines are designed so that new features which further increase speed and sealing capabilities can be easily retrofitted when they are developed.

Other features include: Promotion, which regulates the feeding of trays into the machine; ProPosition tray positioning system; and seal strength and integrity are ensured by the company's Eseal high-force electric heat seal system. The GT0e's compact, rugged and hygienic food industry-approved construction provides full washdown protection. A user-friendly menu-driven control panel with step-


## Food Processing \& Packaging Systems

The food industry faces a great challenge to create cost reductions and increase efficiencies without compromising on quality. ESKO is part of this movement in providing solutions to serve the Food and Beverage Industry. New Value Added food products are driving the innovations and challenging today's packaging era with ESKO assisting right from product development through to processing, product handling and packaging of the final product. With staff experience of over 40 years working with small and major food groups, has provided Esko with the knowledge to help customers achieve a competitive product in today's challenging market. Through modernisation using some of the most innovative concepts, Esko strives to keep abreast to the Australian and New Zealand Food manufactures with these advancements.

What sets ESKO aside from others is the ability to provide customized and unique systems engineered to fit the ever-changing demands and needs of the food manufacturing Industry. Esko partners with customers to make their process more efficient, lower costs and innovate Food packaging in this highly competitive market.

ESKO is therefore key to not only providing off the shelf technical solutions, but also customized solutions to improve production efficiencies with the objective to bring down the daily cost of manufacturing.
by-step prompts, error and status displays, and batch pack counter, ensures ease of set-up.
"We have had fantastic support from Proseal throughout the project," said Jared Simeti, General Manager Operations of Chefgood.
"The installation went flawlessly, and the machines have continued to perform without any issues. Just as important, we know the Proseal service technicians are always there to help if we do experience any problems," he said.

Chefgood's growth has led the company to develop a range of retail products, which was launched in May. It is now in the process of looking for a new site, having outgrown its current one.

Proseal Australia
www.prosealaustralia.com

Proseal GT0e Tray Sealing Machine.

## Food cultures for fermentation

Chr. Hansen uses traditional fermentation principles to help improve quality and shelf life and reduce waste. Its new range is designed to have a low impact on post acidification, making the fermentation technology suitable for a wider segment of dairy producers.

It has been nearly a decade since Chr. Hansen launched its first generation of FreshQ, a range of food cultures designed to improve the bioprotective effects of fermentation in dairy. In this process, the cultures and fermentation help keep food fresh by outcompeting yeast and mould spoilage for the space and nutrients they require to grow.

The next generation of FreshQ cultures is specifically developed to unlock the benefits of bioprotection for producers who may experience challenged cold chains, long fermentation and in-process holding times. The cultures can be applied to a broad range of fermented dairy products, such as yoghurt, white cheese and tvorog.
Benefits of the new range include: less post-acidification impact at accelerated temperatures during distribution, or in circumstances involving long holding times or slow cooling; and it is claimed to have an improved sensory fit compared to other food cultures with bioprotective effects.

## Chr. Hansen

 www.chr-hansen.com

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## Operator handles for vacuum tube lifters

Schmalz is expanding its modular system for the vacuum tube lifter JumboFlex with three new operator handles. Depending on the design, the new control handles can help to increase safety, simplify or accelerate the handling process. The three options are JumboFlex Safety+, JumboFlex Easy-Release and JumboFlex Quick-Release.
JumboFlex Safety + is focused on optimum safety. It features a two-handed concept that protects delicate workpieces when they are released; there is an option to adjust the lowering speed directly on the handle using a screw to provide additional protection; and lifting capacity ranges 20, 35 and 50 kg .

JumboFlex Easy-Release has an additional release lever and features ease of setting down product load; one-handed use; and designed to be locked into one place.

JumboFlex Quick-Release is designed to release load from any height. It features shorter cycle time for quick handling; release lever is not locked in position; and operator can actuate the lever at any lifting height.
Both the Easy-Release and Quick-Release products are only designed to accommodate the largest JumboFlex configuration with a lift capacity of 50 kg . As always, different suction cups can be used for different workpieces and the standard quick-change adapter makes the replacement process quick and easy

## Schmalz Australia Pty Ltd


www.schmalz.com



## Metal detectors

Eriez Xtreme Metal Detectors can identify metal contaminants and protect product purity.
The Xtreme Metal Detector is designed with high levels of sensitivity to detect small ferrous and non-ferrous metal contaminants such as needles, scale, rust, nails, clips, bolts, nuts, staples, stainless steel, aluminium and copper alloys in loose or free-fall food processing systems and final packaged food lines.
The unit is designed to prevent metal contamination in a user's process from the moment ingredients enter the plant until the product finally ships.
In its base package, the metal detector offers a large 178 mm easy-to-use touch screen interface, multiple pre-programmed languages, easy set-up and reporting, multiple USB and interface ports, and remote access all contained in the standard high-pressure washdown design. In addition to its rugged construction, the metal detector has easy-to-use set-up, operation and reporting from a large, well-designed graphical interface.
It complies with HACCP International Food Safety Standards and is suitable for the food, textile, pharmaceutical, plastics, rubber, chemical and many other industries.
The company currently has units of various heights and widths available for shipment, and 'try and buys' for its existing stock.

## Eriez Magnetics Pty Ltd

www.eriez.com.au

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## Plastic-free, compostable label range

Wedderburn partnered with sustainable material company Bio4Life to introduce the Wedderburn plastic-free, compostable label range.
Its compostable range consists of 14 different materials, including traditional white paper; fibrous, natural looking paper; and even plastic-free film that's oil and grease resistant.

All materials are free from plastic and are predominantly made from natural, renewable resources to minimise the environmental impact. Each material is coated with the BioTAK adhesive, a certified compostable adhesive for labelling with permanent tack that adheres to a wide variety of substrates. Materials and the adhesive are certified commercially compostable (to EU standards EN13432) and printed with compostable inks. Both materials and adhesive are approved for direct food contact.

The labels are also certified plastic-free by A Plastic Planet, and businesses choosing to use these labels can add the plastic-free certification mark to their packaging.

Visit the company on stand E3 at foodpro to discuss transitioning to a complete, sustainable labelling solution.

## Wedderburn Pty Ltd

www.wedderburn.com.au


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Australian Food and beverage industries have been recently challenged with increased demand. Existing processes have felt the pressures of the added workloads, and many are looking for new and innovative ways to upgrade their businesses into the future, without the high price tag.

Many sites are running on much older fieldbus technologies such as Device Net, which is well superseded these days. The other issue is finding the level of support for Device Net set-ups, as suppliers within the industry are phasing out this level of support in a movement that almost is forcing businesses into new technology, whether they're ready or not.

There's no "one size, fits all"
Every manufacturer is unique in their needs and requirements, and considering new automation technology can
sometimes feel overwhelming. Which fieldbus do you upgrade to, if at all, or how can you introduce smart devices without having to overhaul the entire network?

What is welcoming is that we're saying goodbye to the days of traditional, bespoke system installations. The long drawn-out process of commissioning customised panels, taking 16 weeks to deliver are behind us.

Today's age of fast connection and single-touch operation capabilities with standard networks and systems are designed to benefit food and beverage plants from day one:

- Open network connectivity
- Real-time diagnostics
- Expansion capabilities
- Flexible process control
- Automatic software updates
- Remote operating functions.


MyfoosCheck

- Wireless Recorders
- Bluetooth thermometer
- Cloud solution
- Fully NATA traceable
- Multi location/user
- Smartphone app


TECHSENSE


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Within the food and beverage industry, the key to finding the best automation solution is a thorough analysis of each individual part of the plant or installation. By carrying out an in-depth analysis of the application, it can be determined if a centralised control system using non-intelligent nodes will deliver the required performance, or if the sheer size of the system means that the control has to be decentralised - using a fieldbus system working with field controls, intelligent valves and actuators.
Hygienic equipment solutions for automation control
In the context of Industry 4.0, demand for automated processes is increasing. So too is the demand for systems with intelligent field devices that can continuously exchange large volumes of (digital) process, device and diagnostic data with the higher-level controller (PLC1).

The digitalisation of all production processes is leading to increased requirements with regard to digital data exchange between process valves and higher-level controllers/PLC.

In conjunction with Industry 4.0, Industrial Ethernet is also becoming increasingly popular. Reasons for this include the ability to access field devices directly from the controller level as well as hassle-free device installation supported by integrated Ethernet interfaces.


However, a field device with a fully integrated Industrial Ethernet interface is still a relatively costly option for most applications.

To allow users to exploit the advantages of Industrial Ethernet even without a fully fledged Ethernet device,



Bürkert's new combination of büS as a sub-bus system with the gateway Type ME43 for connecting control heads and fit-for-purpose devices to the PLC using Industrial Ethernet or fieldbus can represent a cost-effective solution.

Bürkert's Type 8681 is equipped with a universal actuator adapter. This permits attachment to most hygienic process valves currently available on the market. In combination with the gateway Type ME43, hygienic process valves can also be easily integrated in automation systems via Industrial Ethernet. This control head is suitable for CIP applications.


Bürkert's Type 8619 - multiCELL - multi-channel and multi-function transmitter/controller is suitable for measurement and control as well as dosing processes in applications of water treatment plants (like boiler, cooling tower or reverse osmosis systems) and food and pharma plants.

Bürkert's Mass Flow Meters \& Controllers range provides good accuracy and repeatability for gas dosing, fermentation and gas mixing processes. In Type 8745 the thermal inline sensor is located directly in the main gas stream and therefore reaches fast response times while causing a low pressure drop. A direct-acting proportional valve as regulating unit ensures sensitivity. An integrated PI controller ensures good control characteristics of the MFC.

Bürkert's Type 8098 FLOWave Flowmeter is based on SAW (surface acoustic waves) technology and is mainly designed for applications with high hygienic demands. FLOWave has a range of integrated functions, including advantages such as flexibility, ease of cleaning, compact dimensions, lightweight design, easy installation and handling, and is compliant with numerous standards. Optimal measurement results can be achieved with homogeneous liquids, free of air and solid particles. Integrated viscosity compensation can be used for liquids with higher viscosity.

Burkert Fluid Control Systems
www.burkert.com.au


Food Factories, Meat Processing Facilities, Bakeries, Hotels, Nursing Homes, Hospitals, Restaurants, Retail Outlets, Seafood and all other Safety Surfaces.

## Specialty gas product range

The SupaMap Specialty Gas product range at Supagas has been developed for use across an array of application areas in food. The colourless and odourless gases are applied to assist with improving food quality and freshness.

The SupaMap 10 is suitable for food and beverage applications.

The SupaMap 20 relates to modified atmosphere packaging (MAP) gas, used as an atmosphere above packaged red meats to maintain colour and freshness, as well as gas flushing and industrial application use.

The SupaMap 30 has been developed to assist in extending shelf life and improve food quality such as ready meals, meats, seafood, poultry, convenience food and cooked and dressed vegetable products.


SupaMap 40 has a focus on helping to improve the quality of food products such as raw oily fish and seafood and combinations products.

SupaMap 55 is suitable for industries that wish to extend the shelf life such as fresh pasta products and bakery products.

In addition, SupaMap 70 is suited to help food quality of cooked meats, cooked vegetables and cooked seafood.

## Supagas Pty Ltd

www.supagas.com.au


## Chr. Hansen Natural Colors announces company name change to Oterra

On 20 May 2021, Chr. Hansen Natural Colors A/S, provider of natural colours, announced the company will be now known as Oterra.

The new name, Oterra, is inspired by the Latin word for earth. The rebranding reflects the company's commitment to provide the world with colours from natural sources, and contribute to food that is natural, authentic, safe and sustainable. The company's ownership and
 staff have not changed.

The CEO, Odd Erik Hansen, stated: "We have been producing natural colours for more than 145 years now - our new name and brand identity are rooted in this proud heritage and reflect our belief that nature provides the best ingredients."

The new name is the latest in a string of announcements for the company, which was acquired by investment organisation EQT in 2021. In April 2021 the company announced its first strategic investment with the acquisition of SECNA Natural Ingredients Group S.L., a move which supports EQT's strong growth plans for the company.

Cees de Jong, Oterra Board Chairman, commented: "The board is very excited about the relaunch as Oterra - a name and identity that encapsulates our purpose and sustainable value proposition. We see great growth ahead for Oterra and are confident the company will accelerate its development under its new brand."
Oterra
oterra.com


To assess the safety of food, PerkinElmer offers industry-leading solutions for detecting risks to human and animal health. Our instruments are used extensively in the food and beverage industry to detect harmful levels of toxins, heavy metals, and pesticides, ensure compliance with regulations around the globe.
PerkinElmer also offers a full range of dedicated systems for the measurements of compositional and functional parameters in food and feed. Our analytical food testing solutions are enabling our customers to detect adulterations, enhancing their quality and process control efforts and outcomes.

Contact Us to find out more how we can help you with your food analysis.
P: 1800033391 | E:ausales@perkinelmer.com

## Powder handling product

Matcon has launched a new product to its Manual Cone Valve (MCV) range. The device has been designed specifically to assist companies who experience powder handling problems with butterfly valve or slide valve IBCs in the food, beverage and chemical sectors.
The manually operated Cone Valve promotes mass-flow discharge of free-flowing powders, preventing segregation of powder mixes and ensuring product quality.
The unit comprises a valve body with a single-sided arm that supports a cone valve which is raised using a lever handle. The lever can be locked in the open or closed positions, or any intermediate position via a locking handle, depending on the desired flow rate of powder discharge.
It is tested and proven as an effective butterfly valve alternative, overcoming the issues of core flow and particle rolling that can be experienced with standard butterfly valves.
The Manual Cone Valve can be easily retrofitted to any existing flanged IBC outlet, providing a cost-effective way of upgrading a user's IBC fleet with Cone Valve technology.
Each unit has a nominal internal diameter of 250 mm and is designed to fit a vessel or process with the same outlet size for discharging free-flowing bulk material.

A typical example of discharge time achieved when discharging 1000 kg of salt from a 1000 L IBC is only 90 s .
The Classic Matcon IBC System is suitable for applications involving sticky, cohesive powders or where automation is required.

## Matcon Limited

www.matconibc.com



CSIRO has outlined a roadmap that demonstrates how Australia could become a player in the billion-dollar global edible insect industry.

The comprehensive analysis lays out the plans for the emerging industry, exploring the challenges, opportunities, cultural values, sustainability and health outcomes of the edible insect industry in Australia.

Co-funded by CSIRO and the Australian Department of Foreign Affairs and Trade (DFAT) through the Council on Australia Latin America Relations (COALAR), the roadmap provides a framework within Australia for First Nations initiatives, start-ups, insect businesses, researchers, policymakers and community members interested in engaging with the industry.

CSIRO researcher and report co-author Dr Rocio Ponce Reyes said the global edible insect industry was growing fast.
"The worldwide edible insect market is expected to reach $\$ 1.4$ billion in value by 2023 . Europe and the United States of America lead the western world market, with more than 400 edible-insect-related businesses in operation," Dr Ponce Reyes said.
"Insects have high-value nutritional profiles and are rich in protein, omega- 3 fatty acids, iron, zinc, folic acid and vitamins B12, C and E.
"They are also complementary to our existing diets because they are a healthy, environmentally friendly and a rich source of alternative proteins," she said.

More than 2100 insect species are currently eaten by two billion people from 130 countries, including 60 native insect species traditionally consumed by First Nations Peoples in Australia. Iconic Australian species include witjuti (also known as witchetty) grubs, bogong moths, honey pot ants and green tree ants.

CSIRO entomologist and report co-author Dr Bryan Lessard said the report highlighted the importance of supporting and promoting First Nations-led enterprises.
"The roadmap draws on the expertise of Australian and international scientists, Aboriginal and Torres Strait Islander peoples, insect farmers, food processing industry leaders and chefs, to set out the challenges and opportunities presented by one of the world's richest sources of protein and other micronutrients," Dr Lessard said.
"Australia has a high diversity of native insects. Working with First Nations enterprises, many species have the potential to be sustainably harvested or grown in low-impact farms, to be turned into new and delicious Australian foods for us and our pets.
"Commercial insect farming is considered to have a low environmental footprint, requiring minimal feed, water, energy and land resources - factors of importance to the modern health and ethically conscious consumer," he said.

The roadmap also sets out challenges to overcome, including scalability, consumer appetite and research opportunities, and provides options to tackle them, including new products, innovations to farming and collaboration.

CSIRO developed the plan as part of broader research investigating alternative protein sources through its developing Future Protein Mission. It is part of the CSIRO Missions program launched last year. The research body said CSIRO Missions are large-scale research programs aimed at solving some of Australia's most significant challenges collaboratively with the government, academia, industry and community.
CSIRO Head Office
www.csiro.au

# HACCP AUSTRALIA 

 eliminate the hazard - reduce the riskLook closely at who supplies the food industry with the very best food safe materials, services and equipment.

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The Sydney Showground, Sydney Olympic Park will be hosting foodpro 2021 from Sunday, 10 October to Wednesday, 13 October 2021.

Here's a quick rundown on how to get to the event located on Showground Road, Sydney Olympic Park, New South Wales.

Conveniently serviced by bus, train and ferry services, the site was purpose built for the 2000 Sydney Olympic Games and has been designed to cope effortlessly with high volumes of visitors.


## By train

Olympic Park train station is on Sydney Showground's doorstep. The Sprint service, operated by CityRail, travels between Lidcombe and Olympic Park Stations daily, every 10 minutes.

To plan your trip and get the latest travel information, visit www.transportnsw.info.

## By bus

Sydney Buses operate direct bus services to Sydney Olympic Park from a number of locations including Lidcombe, Strathfield and Parramatta.

To plan your trip and get the latest travel information, visit www.transportnsw.info.

## By ferry

Sydney Ferries run a daily service between Circular Quay and Parramatta stopping at Sydney Olympic Park Ferry Wharf. To travel to Sydney Showground, visitors must also catch a connecting bus.

To plan your trip and get the latest travel information, visit www.transportnsw.info.

## By car

Sydney Olympic Park is easily approached by road, with the M4, Victoria Road and Parramatta Road in close proximity.

For short visits there are some 2-hour, free parking spaces located on Grand Parade, Olympic Boulevard and Dawn Fraser Avenue.

Sydney Olympic Park also has over 10,000 paid parking spaces site-wide. Carparks P1, P5 and P6 are in close proximity to Sydney Showground.

For the latest information on parking costs at Sydney Olympic Park, visit www.sydneyolympicpark.com.au/ parking. You can also pre-book parking through Sydney Olympic Park.

## By air

Sydney Airport is approximately 20 km from Sydney Olympic Park and is easily accessible by all modes of transport. For more information, visit www.sydneyairport.com.au.
A.B.N. 22152305336
www.wfmedia.com.au

## Head Office

Unit 7, 6-8 Byfield Street, North Ryde Locked Bag 2226, North Ryde BC NSW 1670 Ph: +61 291682500

Editor: Carolyn Jackson wnift@wfmedia.com.au

Editorial Assistant: Ryan Johnson

Publishing Director/MD: Geoff Hird

Art Director/Production Manager: Julie Wright

Art/Production: Colleen Sam, Veronica King

Circulation: Dianna Alberry
circulation@wfmedia.com.au

Copy Control: Mitchie Mullins
copy@wfmedia.com.au

Advertising Sales Manager
Kerrie Robinson
Ph: 0400886311
krobinson@wfmedia.com.au
Nikki Edwards
Ph: 0431107407
nedwards@wfmedia.com.au

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