

THE INTEGRATED EDGE

Every step of the way

We understand how things are connected, all the way from the food source to the consumer. Here's how we can support you through every step of the value chain.



 **Tetra Pak®**
PROTECTS WHAT'S GOOD

The Integrated Edge

Packaging solutions. Filling and processing equipment. And solutions that go beyond – far beyond – the factory floor. Fact is, we've got your back all throughout. From providing knowledge and advice about food sources and raw materials to operational excellence and a deep understanding of the consumer landscape.

Here at Tetra Pak, we have the capabilities to support you through the entire value chain.

So how can we help you?

Choose a step in the value chain and find out.



Food
Sources



Product
Innovation



Smart
Production



Packaging
& Distribution



Consumer
& Society

OUR CASES, YOUR REALITY



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Food
Sources



Welcome to a global food network

We have collaborated with various manufacturers, suppliers, customers, industry associations and academic institutions for decades. Our experts are connected to a food industry network that is both deep and wide. We're happy to share that combined and extensive knowledge with you.

So if you are about to enter a new segment or market, we can point you in the right direction for food ingredients. Or help you launch a product based on new or additional food sources.

Need other insights and advice about healthy, high-quality food sources or raw materials? We're there for you.



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Unleashing ice cream creativity

With our global network, we can connect you to the perfect ingredients. Our ingredient portfolio includes everything from milk powders and texturisers to ripples, coatings and inclusions such as chocolate chips and marshmallows. And, of course, plant-based alternatives – oat, rice, almond and more.

Plant-based frozen desserts have huge potential, and offer exciting new opportunities and functionalities. One example of the latter is the water-binding capabilities of plant-based proteins. The more water-binding a protein is, the more viscosity it will provide – and controlling viscosity is a crucial part of ice cream production as it determines things like sensory experience and process adaptability to ensure product performance.

Plant-based frozen desserts are still new to the industry. But with our expertise, industry network and a state-of-the-art Product Development Centre in Aarhus, Denmark, we can support in exploring new concepts and in developing new products.

<https://www.brightfood.com/>

Like, for example, when we in 2023 developed two new plant-based products – a lychee/coconut bar and a kiwi-flavoured bar – together with Chinese ice cream producer Bright. We helped design the concept and recipe, and we also supply ingredients – more specifically, kiwi puree and one of our Luxilac™ powders (a substitute for skim milk powder) – for the ongoing production.

The ice cream Product Development Centre in Aarhus

“This little area in Denmark is really the centre of the world for ice cream innovation. I like to call it the Silicon Valley of ice cream.”

Torben Vilsgaard,

Ice Cream Academy Manager, Tetra Pak



FAVA BEANS – the next big ingredient?

Looking to produce healthier ice cream? Then fava beans just might be the way to go:

- Highly nutritious
- Contains antioxidants
- Neutral flavour

OUR ICE CREAM INGREDIENT PORTFOLIO

- Milk powders and substitutes
- Inclusions
- Texturisers
- Ripples and coatings
- Sweeteners
- Cocoa products
- Fats and oils
- Flavours and colours
- Plant-based alternatives





Innovation starts here

Got ideas? That's great – but, turning them into products can be challenging. At least if you are on your own.

We can help you make the right decisions and turn the challenge into an opportunity to grow your business. Our co-creative environment is where you turn rough sketches into products, and wild ideas and visions become commercial reality.

Our expertise and tools are there to support you all throughout the innovation journey, regardless if your ambition is to capture the hearts of consumers, reduce costs, decarbonise production – or all of the above. Get inspired by the latest trend research. Identify opportunities in an ideation workshop with our experts. And create prototypes – and trial them! – at one of our Product or Food Development Centres.





Making the most of whey

Mammen Dairies is a producer of high-quality cheese since 1911. Together with us, they have found a way to make the most of whey – a potentially valuable by-product of cheese production. Whey contains water and proteins, and Mammen Dairies has installed a reverse osmosis membrane filtration system for whey concentration. The filtration system removes approximately 75% of the water from the whey and the concentrated whey protein is then sold to producers of ingredients for infant formula and sports nutrition drinks.

The filtration system makes a big difference to Mammen Dairies' bottom line – and to their environmental footprint, as it reduces the number of truck-loads of whey protein they need to transport.

The same goes for the water from the whey, as it is purified in the built-in reverse osmosis polisher and used for cleaning the dairy equipment.

“We have an annual saving of 150 tons of diesel and 460,000 km on the road.”

Peter Filtenborg Staunsbaek,
Technical Business Development Manager,
Mammen

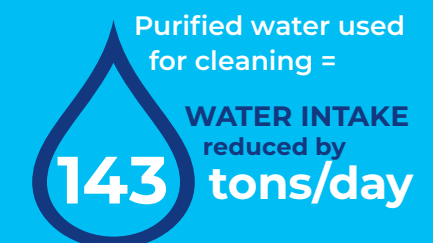
<https://mammencheese.dk/>



OUR DELIVERIES

- Membrane filtration system with a built-in reverse osmosis polisher

SOLUTION SAVINGS





Cutting costs with indirect heating

South Africa's ButtaNutt supplies plant-based beverages to some of the largest retailers in the country. Before scaling up their operations, they were using a conventional heat treatment system. As they now were looking to boost capacity and acquire a new, modern processing line, they wanted to stay true to the slightly 'caramelized' flavour of the old system.

When turning to us, ButtaNutt knew that direct heat treatment was commonly used for making

high-quality plant-based beverages. They were, however, open to alternatives – and our experts believed that an indirect heating system would produce a taste closer to what ButtaNutt buyers knew and loved. In addition, this would be more economical to both buy and operate.

The trial at our Product Development Centre confirmed the hypothesis: the more economical indirect heating system indeed did result in a caramelised product flavour.

“The trials proved we could accurately replicate ButtaNutt’s existing product flavour with indirect heating. This gave ButtaNutt confidence in the transition to an end-to-end Tetra Pak line.”

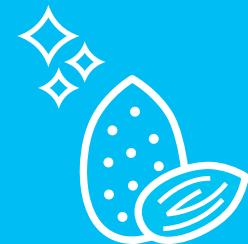
Mats W Anderson,
Commercial Manager Plant Based, Tetra Pak

<https://www.buttanutt.co.za/>



OUR DELIVERIES

- Trials at PDC
- Indirect heating system (Tetra Pak® Tubular Heat Exchanger)





Ice cream innovation made easy

Ice cream consumers love novelties. The Norwegian market, where Hennig-Olsen Is (to avoid any confusion: “is” means ice cream in Norwegian) is one of two leading players, is no exception when it comes to a constant demand for new sensations.

“It’s easy to create new shapes and to test new ingredients. We can have ice cream with different pieces of caramel, strawberry, nuts and whatever we can come up with.”

Paal Hennig-Olsen,
CEO Hennig-Olsen Is

<https://www.hennig-olsen.no/en/>

When Hennig-Olsen were looking to include large chunks of, for example, caramel or cookie dough in their ice cream sticks, they found a solution in **Tetra Pak® Extrusion Wheel**.

The wheel makes it possible to make ice cream products with inclusions of up to 25 mm in diameter. The inclusions are evenly distributed in the ice cream, and the patented wheel design ensures that the sticks don’t collide with large inclusions that could shatter the sticks or bring them out of position. The wheel design aligns with trays to ensure perfect placement every time and minimises waste to less than two percent.

Technology aside: with all the possibilities it creates, the extrusion wheel is an important part of the innovation puzzle at Hennig-Olsen Is.



TETRA PAK® EXTRUSION WHEEL BENEFITS

- Simple and smart technology
- No nitrogen cooling required
- Opens up new possibilities
- Easy to include large inclusions
- Very low waste
- Can be added to existing lines

First product produced with Tetra Pak® Extrusion Wheel:

CRÈME CARAMEL

A premium product with caramel sauce and caramel bits dipped in chocolate



**INCLUSION
SIZE CAPABILITY**

up to
↑ **25** mm

**PRODUCT
WASTE**

<2%



Smart
Production

Optimise your Total Cost of Ownership

Facing pressure to enhance the flexibility of a current line? Want to ensure uptime, or uncertain about how to make your operation more cost- or resource efficient? With our connected and integrated plant solutions, we provide the support you need. Our experienced engineers have the expertise to help you identify efficiency opportunities, ensure food safety and quality, reduce your environmental impact and make the right, insight-driven decisions to optimise your Total Cost of Ownership (TCO).

We find the optimal plant solution for you, so you can gain control of your entire operation. And we make sure the service solutions are right, too – we tailor service contracts to your situation and requirements.





Building a state-of-the-art dairy

When US dairy cooperative Select Milk built a new, state-of-the-art dairy processing plant in Littlefield, Texas, we supplied the advanced and cost-efficient solution. As an example of the latter, technology from us helps Select Milk produce low spore powder, which can be sold at a premium price. This is how it works:

The Littlefield facility is a Reverse Osmosis (RO) plant, where milk first is concentrated to 30% total milk solids and then further concentrated by a thermal vapour recompression (TVR) evaporator to

around 50% milk solids. In the next step, milk solid solution is spray dried into non-fat dry milk or skim milk powder and packed into bags. The plant solution uses RO membranes. These make high-quality low-spore powder and offers flexibility – if Select Milk wants a product with different proteins in it, they can just change the membranes. Furthermore, their energy-efficiency contributes to the overall savings.

All equipment is handled by one automation system, Tetra Pak® PlantMaster.

“The solution is more advanced than others we have looked at, and it is highly innovative. Tetra Pak brings a lot to the table from a turnkey perspective.”

Steven Cooper,
President and General Manager of
Dairy Manufacturing Operations, Select Milk

<https://selectmilk.com/>



SOLUTION BENEFITS

- Low operating cost
- Low building cost
- Less bacterial growth
- One automation system for all equipment

OUR DELIVERIES

- Tetra Pak® PlantMaster automation system
- Reverse Osmosis plant

Daily production

 **+180 000 kg**
milk powder

 **+10 000 kg**
butter

 **ENERGY SAVINGS 70%**
vs. evaporator-dryer-based process



A helping hand from a collaborative robot

Filling hundreds of tubs with 2.5 to 4.5 litres of ice cream every day – that sounds like tiring, monotonous work, right? At Dutch ice cream and patisserie supplier Otelli, this is no issue at all. The reason? The work is handled by a collaborative robot (a so-called cobot), a small user-friendly robot which is designed to interact with humans. Thanks to the cobot, the staff can focus on more value-adding tasks.

The reason Otelli started looking for ways to automate certain production process steps was a scarcity of skilled labour. Our **Tetra Pak® Robot Filler M1** was chosen, and today this compact solution is connected to a continuous freezer and fills 2,400 litres of ice cream per hour.

“The machine is running well. It’s easy to operate, very reliable and the consistency of the filling is better.”

Jaco de Vreugd,
Managing Director, Otelli

<https://www.otelli.nl/>



SOLUTION BENEFITS

- Automates ice cream filling
- Better consistency of product
- Ensures continuous production
- Smart, flexible and ergonomic
- Easy to operate
- Frees up time for employees

OUR DELIVERIES

- Tetra Pak® Robot Filler M1



Realising a vision for global Operational Technology standardisation

Royal FrieslandCampina is a multinational dairy cooperative, headquartered in the Netherlands. Back in 2018, FrieslandCampina created a vision for global OT (Operational Technology) standardisation for their over 40 production sites, mainly located in Europe and Asia. They soon realised they needed a standardised automation framework – and found it in Tetra Pak® PlantMaster.

This solution enables integration of the company's existing automation systems into a standard platform.

FrieslandCampina's global system integrators have access to the Tetra Pak® PlantMaster automation software library, and we provide the technical support, training, consultancy and quality assurance required to implement it. In 2021, the first full installation was completed at a cheese plant in the Netherlands, and Tetra Pak® PlantMaster is now up and running at a number of Friesland Campina's plants – where the plant managers are enjoying the immediate benefits of having reliable real-time data upon which to base their daily decisions.

“We're confident that Operational Technology standardisation, along with Tetra Pak's standardised automation framework, is the best way to reduce project costs, lead times and start-up times.”

Ron Veldhuizen,
Global Director Operational Technology,
FrieslandCampina

<https://www.frieslandcampina.com/>



SOLUTION BENEFITS

- Existing automation systems integrated into a standard framework, unlocking the potential for plant optimisation, traceability and efficiency
- Shorter lead and start-up times reduce pressure on projects and project costs
- Best practices spread around the company faster

OUR DELIVERIES

- Tetra Pak® PlantMaster automation system
- Access to the Tetra Pak® PlantMaster software library
- Technical support and training





Producing quality mayonnaise

When Spanish sauce producer Salsa Rica wanted to grow their business, they knew they had a few quality and consistency issues to resolve. Salsa Rica took their mayonnaise recipes to us, tried them out with Tetra Pak® High Shear Mixer – and were amazed by the results. With our high shear mixers, quality parameters such as appearance, taste and mouthfeel are tightly controlled. Thanks to the dynamic HS mixing head, for example, it becomes possible to fine-tune the size and distribution of droplets in the

product, and hence achieve the exact desired viscosity, mouthfeel and texture.

In addition to expertise in recipe and parameter optimisation, we delivered two new complete lines for production of mayonnaise or other cold emulsified sauces. The emulsion process is faster with the new lines and thanks to precise process control, Salsa Rica has improved the texture, colour and consistency of the mayonnaise.

“The four main benefits with this new solution are the quality of the product, the flexibility of the process, a high standard of food safety and fully automated production.”

Marcos Ochagavia,
Sales and Marketing Manager, Salsa Rica

<http://en.salsaricaweb.es/>



OUR DELIVERIES

- Recipe trials
- Two new processing lines consisting of
 - » Tetra Pak® High Shear Mixers
 - » Buffer tanks
 - » Ingredient dosing system
 - » Tetra Pak® PlantMaster automation for line control

SAUCE
PRODUCTION

100
tons / day

SALES

+20%





Packaging
& Distribution

Benefit from our integrated packaging and distribution solutions

Striving to take the lead on efficiently delivering safe, sustainable and traceable food to every corner of the world? We support you with optimised and integrated packaging and distribution solutions, so you can meet the different quality requirements of different foods – today and in the future.

We are continuously increasing the use of renewable and recycled materials in our packaging. FSC-certified* packages and tethered caps made from sugarcane-based polymers are examples of solutions that can help you reduce your environmental footprint.

* FSC = Forest Stewardship Council.



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How a carton package helped revive an iconic product

The Rosella Preserving & Manufacturing Company was founded in Australia in 1895. The brand, and its tomato soup, became an integral part of daily life for many Australians growing up in the 20th century, but by 2020, its popularity had waned. The last soup cans were taken off store shelves, and the last chapter in Rosella's story was, everyone thought, over.

However, the Australian public thought otherwise. People started calling Rosella's hot line, wondering where their favourite tomato soup had gone. With our help, Rosella devised a plan for a relaunch of their iconic product. The packaging format could be a potential game changer – maybe cartons could be the way to go, both to modernise the company's image and to win over younger, more environmentally conscious consumers? Rosella met up with our team, which suggested Tetra Recart, the retortable carton package for shelf-stable food. And to follow up on that idea, we presented mock-ups of two different package designs, and a series of ideas for future line extensions.

We also connected Rosella to an Italian co-packer that was able to produce Rosella's condensed tomato soup using the secret ingredients that make the soup so special. When the product range was confirmed, the team managed to get the original Condensed Tomato soup – plus a Creamy Pumpkin, a Potato and Carrot and a Tomato and Pepper flavoured soup – into one of the key retailers in Australia. The relaunch was built upon 'Newstalgia' – a concept that represents Rosella's status as an established legacy brand that's still relevant in the modern world.

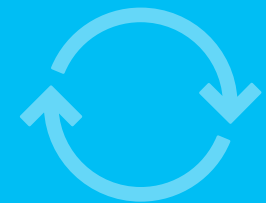
"I walked into that first meeting thinking of Tetra Pak as a potential partner ... and I walked out convinced we had found a new partner."

Sharon Tan,
former Brand Manager, Rosella



RELAUNCH RESULTS

- Rosella's Condensed Tomato Soup quickly became the top SKU in both Coles and Woolworths
- The three other SKUs were ranked in the top 20
- Both retailers gave Rosella more opportunities for ranging other new product developments





Just freeze, peel and pop!

The best way to enter the booming ice cream market of Thailand? When Thai juice producer Doi Kham wanted to expand their product range, they joined forces with us and came up with a new product idea: an ice lolly called Doi Kham Ice Pop, which contains natural juice and comes in an innovative packaging: Tetra Fino® Aseptic 100 Ultra MiM, a small and handy package that is easy to hold and eat from with minimum spilling. It also has an easy-to-open, hygienic and robust tear-off tab.

In addition to its consumer-friendly features, the package allows the juice drinks to be produced

and distributed in small carton packages at room temperature. They can then be turned into frozen products in shops or at home. This means Doi Kham was able to enter the ice cream market without setting up a chilled distribution chain. With their long shelf life and thanks to the aseptic technology, the ice lollies can reach a broader geographic market.

The product is positioned as an in-home refreshing snack and targeted to young consumers. Just freeze, peel and pop!

“With the launch of Ice Pop, we are introducing a new style of natural juice ice lolly that comes in unique packaging, allowing for distribution at room temperature.”

Pipatpong Israsena Na Ayudhya,
President and CEO, Doi Kham



About the Tetra Fino Aseptic 100 Ultra MiM package

- Winner of the World Star Award in the Beverage category, 2019
- Protects against light and oxygen
- Aseptic technology
- Can be produced on on Tetra Pak® A1 for Tetra Fino® Aseptic filling machine platform



Be in the know

What kind of products and features do and will the consumers of today and tomorrow look for? How is legislation impacting markets around the world, and what about the societal demands for sustainable solutions such as increased use of plant-based materials and recycling initiatives?

By monitoring consumer trends and researching environmental regulations and legal frameworks, we know what's moving and happening in the world of food and beverages. Every year, we publish a report, Tetra Pak Index, on the latest consumer trends, facts and figures from our industry. And we use our knowledge to help you make the right decisions – and take action! – in an ever-evolving landscape.





Boosting sales with scan-and-win promo

When Mexican juice producer Valle Redondo saw an opportunity to boost market share, they asked us for help. The two companies have a long history together – we have been cooperating and co-innovating with Valle Redondo since the early 80's – and now we suggested a first foray into digital consumer engagement.

We detailed the various solutions we could offer to help Valle Redondo reach their objective of accelerated growth. They chose our Scan & Win solution and decided to use their premium Natura juice brand.

Unique QR codes were printed on 705 000 Tetra Prisma® Aseptic 1000 Square 1-litre packages. By scanning a code and registering themselves on a landing page on Valle Redondo's website, consumers got the chance to win various prizes. The promotion boosted Natura sales by 40% – far above Valle Redondo's expectations.

Apart from increasing sales, Valle Redondo also wanted to forge a deeper connection with consumers. This objective was also achieved, partly because the winner of the top prize attracted media attention.

“In this instance, however, the decision was not to launch a new product, but rather to ‘sweat existing assets’ – i.e., to do more with what the company already had.”

Gerardo Garza,
Key Account Manager, Tetra Pak

<https://valleredondo.com.mx/en/landing-ingles/>



ORIGINAL OBJECTIVE

- 5% sales increase

RESULTS

↑ SALES INCREASE
+40%

8K
PACKAGES
SCANNED

3.6K
new
registered
users

3 000
PRIZES WON





Food
Sources



Product
Innovation



Smart
Production



Packaging
& Distribution



Consumer
& Society

When the sum is greater than its parts

Access to high-quality food sources, help to develop innovative product concepts, connected and integrated plant solutions, improved functionality and sustainability of your packaging and distribution solutions, insights into consumer trends and food legislation: our capabilities cover the entire value chain.

Some of our customers have already experienced the benefits and the tangible efficiency gains of working with a global supplier with local presence and a wide range of expertise – from end to end.



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Re-inventing ginger drinks

A ginger drink for on-the-go consumption – that was the concept when Thai manufacturer New Concept Product wanted to expand its business. To make the launch a success, they teamed up with us.

Ginger drinks are generally sold in powder format. But here, an innovative idea came up when New Concept Product met with us. What about selling it as a ready drink in on-the-go packages, to catch the interest of a new and younger generation? New Concept Product decided to create a ready-to-drink ginger beverage to be served cold. The chosen

package was Tetra Prisma® Aseptic 250 Edge DreamCap™ 26 – an easy-to-grip, conveniently sized carton package with a re-sealable one-step closure.

Aseptic technology makes sure to keep all nutrients in the package safe for a year, without the use of any preservatives. Our solution also contains a smart production line.

The drink, perfectly aligned with consumer demand for healthy, immunity-boosting products, was named HOTTA Cool. It launched in early 2022.

“We are thrilled to launch HOTTA Cool drinks in the new Tetra Pak UHT packaging, offering good health in convenient, on-the-go ginger products for the young generation of consumers who need healthy, delicious drinks with benefits for boosting their immune system anytime, anywhere.”

Kanchana Bamrunakit,
New Concept Product Co., Ltd.

<https://www.ncp.co.th/en/>



OUR DELIVERIES

- Production line including
 - » Tetra Pak® Aseptic Tank
 - » Tetra Pak® Homogenizer
 - » Tetra Pak® A3/CompactFlex filling machine
- Tetra Prisma® Aseptic 250 Edge DreamCap™ 26 carton packages
- Research and consumer insights



Staying on top of ice cream trends

Bachir Ice Cream is the king of Lebanese ice cream. What started out as a family business in the mountain village of Bikfaiya back in 1936 is now a nationally well-known establishment, run by the second and third generation of the family.

One of the reasons Bachir Ice Cream continues to stay on top is the close and long-lasting relationship with us. The company future-proofs its business by

learning about optimising processing technology, new recipes and market trends from our Product Development Centre in Aarhus, Denmark. One example of the latter is that they invested in a new ingredient doser to respond to a growing trend of people wanting ingredients such as fresh strawberries, raisins and almonds in their ice cream.

“The results are optimal production, very low maintenance, consistency in production, and no headaches.”

Maurice Bachir,
Operations Manager and Business Developer,
Bachir Ice Cream

<https://www.bachir.com/>



Food
Sources



Product
Innovation



Smart
Production



Packaging
& Distribution



Consumer
& Society



Tetra Pak® Ingredient Doser 2000 A2 benefits:

- Ensures stable and consistent production
- Delivers uniform product quality
- Low maintenance costs



Food
Sources



Product
Innovation



Smart
Production



Packaging
& Distribution



Consumer
& Society

Working together for added value

Vietnam-based contract manufacturer DenEast's primary business revolves around dairy based nutrition products. However, the company's installed manufacturing capacity enables them to manufacture a wide range of beverage products. And now, DenEast is on a mission: to become the preferred choice for companies looking to enter or expand on the Asian market. We here at Tetra Pak have been along for the ride since day one, supplying all the solutions.

DenEast offers a bespoke approach where flexibility is key. All customers have different requirements – sometimes they have a product that need new aseptic packaging, other times the customer may be looking at entering the plant-based market. Whatever their needs, we work closely together with DenEast to meet them.

“At DenEast we not only bring processing and filling together. Working with a single partner, Tetra Pak, and getting all our solutions from them means we are able to bring together the whole value chain, including processing, packaging, distribution, product innovation and marketing.”

Johan Bodén,
CEO, DenEast

<https://www.deneast.com/>



PACKAGING SOLUTION

DenEast currently works with the following packaging equipment and packages:

- Tetra Pak® A3 Speed
- Tetra Pak® A3/Compact Flex
 - » Tetra Brik® Aseptic 125 Slim Leaf
 - » Tetra Brik® Aseptic 200 Slim Leaf
 - » Tetra Prisma® Aseptic 200 Edge and 250 Edge

Packages produced 2021:

~250 million

Packages produced 2022:

360 million

Want expert advice, every step of the way?

We hope you feel inspired by the customer cases we've put together. Maybe our knowledge, expertise and end-to-end perspective can help you solve your challenges too?

Explore The Integrated Edge



