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DELLA COSMETICA IN TUTTE
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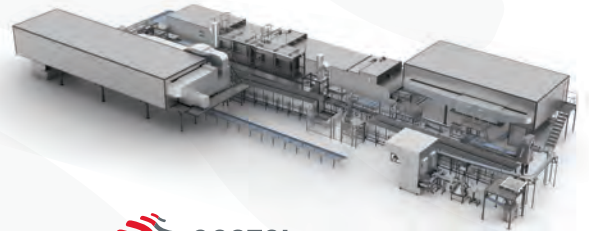
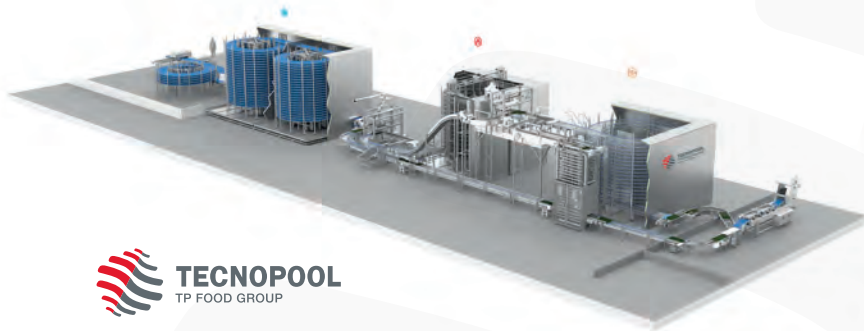
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PACKAGING



PACKAGING

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PRESERVING

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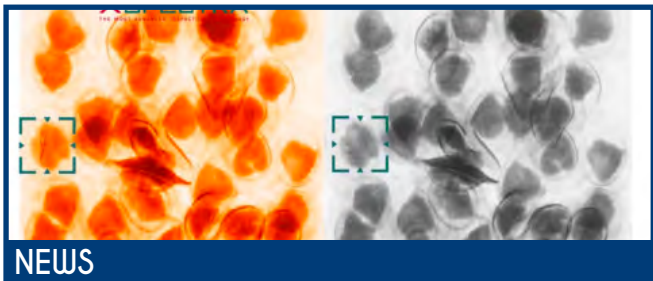


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SIMPL-CUT REVOLUTIONIZES LABELING MARKET

A “Cutting Edge” Roll-fed Solution by P.E. Labellers

P.E. Labellers is one of the world’s leading providers of innovative labeling solutions. The company’s latest development is called Simpl-Cut™, and it is “simply” revolutionizing the Roll-fed labeling market.

Despite being widely used in industries such as soft drink and water, traditional Roll-fed labelers have several areas that can notoriously cause downtime and frustration for users.

One of the biggest complaints about traditional roll-fed labelers is downtime associated with the frequent cleaning of the vacuum drum that transfers labels after they are cut. In traditional Roll-fed labelers, glue can accumulate on the drum and in the vacuum

holes. Eventually, the machine must be taken out of operation and cleaned. Additionally, the label cutting area of traditional Roll-fed labelers presents inherent challenges for maintenance personnel.

Typically, the setup time for the cutting blades is long and significant expertise is required to optimally set them up. Simpl-Cut uses a “cutting edge” process to solve each of these problems.

- Identikit**
- **INNOVATIVE CUTTING SYSTEM**
IMMEDIATE BLADE CHANGE IN 10”
 - **GLUE APPLIED BEFORE CUTTING**
DRUM ALWAYS CLEAN





P.E. LABELLERS™



- **ONLY ONE DRUM**
ZERO MAINTENANCE

- **UP TO 5 DIVISIONS PER DRUM**
TOP LEVEL FLEXIBILITY AND SPEED

- **NO-STRESS LABEL UNDERWAY**
EFFECTIVE MANAGEMENT

- **TWO-IN-ONE MACHINE**
HOT MELT ROLL-FED AND LINERLESS PRE-GLUED

A “Cutting Edge” Solution

The patented Simpl-Cut technology optimizes the labeling process, virtually eliminating maintenance-related downtime and reducing cost by addressing three major areas:

- 1) One of the most obvious benefits of the Simpl-Cut system, as the name implies, is the simplicity of the cutting system. Unlike traditional roll-fed labelers that use contrasting blades to cut the label, Simpl-Cut uses fixed blades on a rotating drum to very

simply cut the label. The fixed blades are contained in a cartridge which can be changed out and ready to run in less than ten seconds. The process of changing and setting up blades can take hours in traditional Roll-fed labelers.

- 2) Second, in the Simpl-Cut process, hot-melt glue is applied prior to the cutting of the label, virtually eliminating glue buildup on the drum. In traditional Roll-fed labelers, glue is applied after the label is cut, leading to significant glue buildup on the drum which has to be cleaned often by maintenance staff.
- 3) Lastly, Simpl-Cut optimizes the labeling process by using only one drum to transfer and cut the label, whereas traditional Roll-fed labelers require two separate drums for each function. This revolutionary feature significantly reduces maintenance, improves uptime and allows for much faster format changes.

A Global Revolution

“The response from our clients has been outstanding,” says Scott Smith, Senior Vice President of Business



Development of ProMach, the global group leader in Packaging the P.E. Labellers in part of. "The problems that the Simpl-Cut technology is solving are universal, so these systems are being purchased by a wide variety of clients, from multinational soft drink manufacturers to regional bottled water companies."

As a product brand of global packaging industry leader ProMach, P.E. Labellers has an extensive sales and service network around the world. The company believes that its global footprint is key to ensuring the success of Simpl-Cut. "This is truly a global product," Smith says. "Adoption has been especially strong in Western Europe, South America, Mexico and the United States. We clearly understand the importance of local service and support and have made significant investments in our aftermarket infrastructure to be able to support our clients around the world."

One of the earliest adopters of Simpl-Cut technology in the United States has been Silver Springs Water. According to President Kane Richmond, the Simpl-Cut technology is the future of Roll-fed labeling. "Silver Springs has been a customer of P.E. Labellers and their Roll-fed systems for years. We saw the Simpl-Cut technology soon after it was released and liked the simplicity of the single drum, the reduced setup time and the quick-change knife system. We liked it so much that we ordered two Simpl-Cut machines. I expect this to be the standard for Roll-fed labeling moving forward."

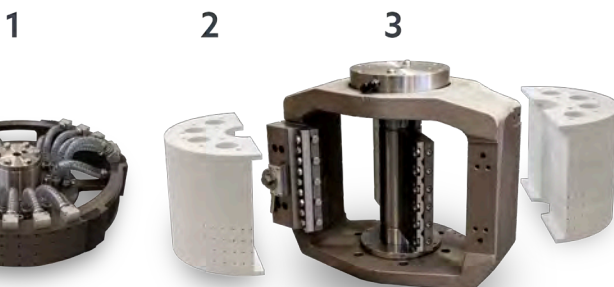
Other famous natural mineral water brands have been among the first to benefit from it. For example, Spumador, part of the Refresco group, already has four Simpl-Cut Flex installed in different factories and intend to purchase new ones. Volvic, a brand of the Danone group, and Silver Springs Water are other important references. 🏠

www.pelabellers.com



मंटुआ (इटली) में 1974 में स्थापित, पी.ई. लेबलर्स पूरी तरह से मॉड्यूलर और एर्गोनॉमिक स्वचालित लेबलिंग मशीनों के डिजाइन और निर्माण में एक वैश्विक लीडर है। विकसित समाधान सभी उपलब्ध लेबलिंग संभावनाओं की पेशकश करते हैं, यहां तक कि पारस्परिक रूप से संयुक्त, स्वतंत्र और विनिमेय मशीनों और स्टेशनों के माध्यम से भी। पी.ई. लेबलर पेय, वाइन और स्पिरिट, खाद्य और डेयरी, व्यक्तिगत और घरेलू देखभाल, फार्मा, रसायन और पालतू पशु आहार के क्षेत्रों के लिए हर साल रोटरी और रैखिक दोनों तरह से 450 मशीनों का उत्पादन करता है। निरंतर समर्थन और रखरखाव सेवाओं की बदौलत आज, 10,000 पी.ई. मशीनों को दुनिया भर में स्थापित और व्यापक रूप से दूरस्थ रूप से प्रबंधित किया जाता है। पी.ई. लेबलर्स एक वैश्विक आयाम पेश करता है: इटली, अमेरिका, ब्राजील में वितरित 8 उत्पादन स्थल और पूरी दुनिया में 500 कर्मचारी। यह कंपनी बहुराष्ट्रीय समूह प्रोमैक का हिस्सा है, जो पैकेजिंग में विश्व में अग्रणी है।

CHANGEOVER ROLL-FED



CHANGEOVER SIMPL-CUT





SIMPL-CUT™

The Simple Revolution

**Roll-fed Labelling
will never be the same.**



MINERAL WATER



BEVERAGE



CHEMICAL



FOOD & DAIRY

Simpl-Cut™ introduces the cutting-edge next generation of automatic labelers. Completely innovative cutting system and gluing concept that revolutionizes the traditional operating principle of the Roll-fed world.

What's on the line?

Ingenious Cutting System
change blade in 10" without adjustment

Revolutionary Gluing
glue roller before label cutting

Single Drum
for three operations: gluing, cutting, label application

Total Flexibility
3, 4 and even 5 different division drums on the same station

All-In-One
Roll-fed cold glue and linerless pre-glued technology

FAULTLESS HIGH-VELOCITY PACKAGING ESSENTIAL TO KEEP PACE WITH GROWING DEMAND

Convenience foods are an international phenomenon, with new variants and markets appearing all the time. Many are based on short-term fads, but there are some that have stood the test of time – for decades indeed – including the humble instant noodle.

Forming a staple meal and/or snack across countless regions and multiple demographics, they are just so easy to make, and with so many flavours and spice packets, you could probably eat a different variety every day of the year. The latest pandemic has also proved how important tasty, easy-to-make comfort food has been for populations everywhere, with some figures pointing to a doubling of consumption.

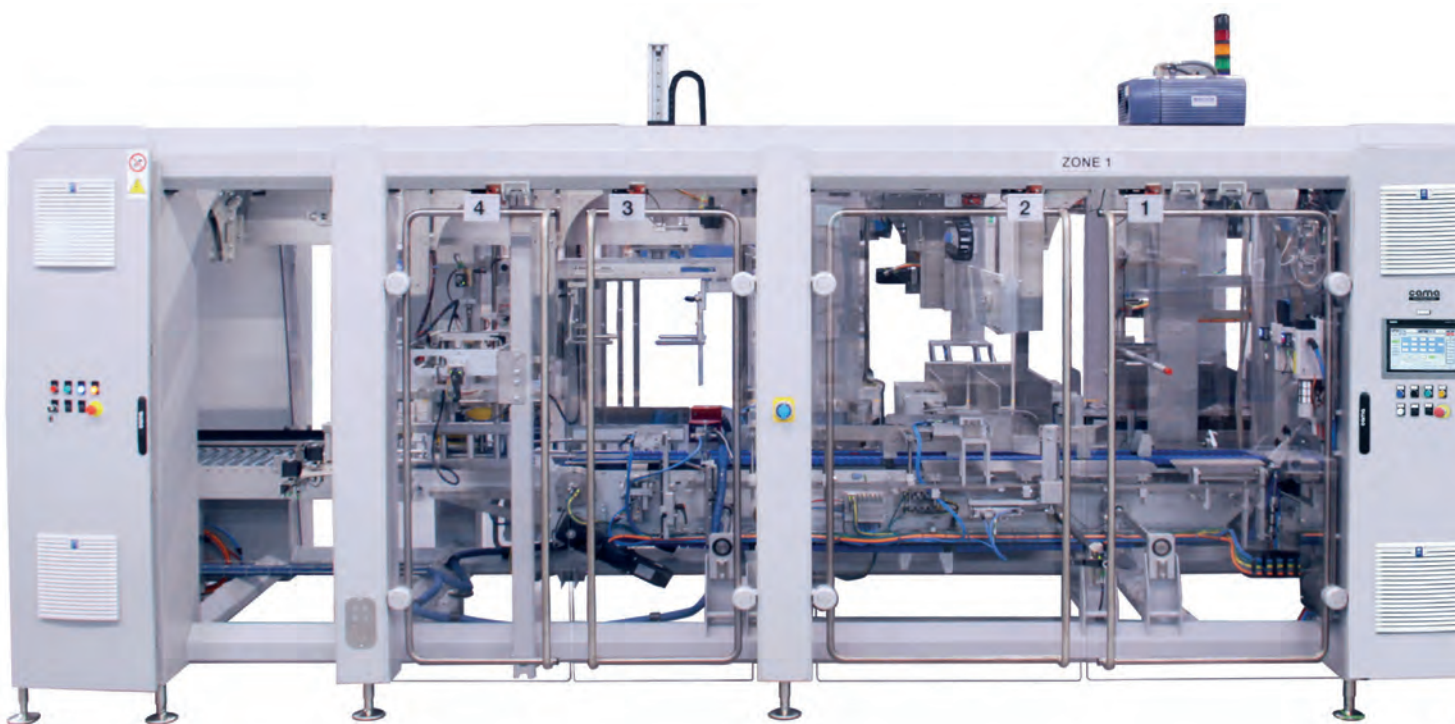
“There is a massive array of market maturities all over the globe,” explains Alessandro Rocca, Sales Engineering Director at Cama Group. “Some markets are well established, such as Japan and China, but we are seeing rising demand in India and Malaysia too, both of which are overtaking China in terms of volume. Major growth is anticipated in Africa and the Philippines too.

“Although diverse geographically,” he continues, “all of these markets have something in common; and that is the need to introduce further economies by exploiting

automation in their packaging regimens. The mature markets are already well served, but the growing markets – especially now companies have secured a foothold – are starting this modernisation journey, hunting for greater efficiencies.

“For some multinationals, it is a natural progression,” Rocca adds, “comprising a ‘technological cut-and-paste’ of operations from an established region to a growing region. We are fortunate to be on the supplier lists of many of these larger companies in their established markets, so are, as a result, trusted by them to learn from these current installations and repeat our successes elsewhere! We have a mentality and personality that makes us attractive to smaller companies too, so we are seeing a noodle-driven expansion in quite few different regions.”

In a recent project, Cama was tasked with developing a new secondary packaging solution for one of the worlds largest food and confectionary suppliers, at a brand-new greenfield site in India. The customer, seeing a 30% increase in noodle demand even before the pandemic, was eager to start exploiting the capabilities and flexibilities that automation would deliver and called upon Cama to bring its expertise to the project.





Evolving markets require proven solutions in order to gain greater economies. Noodles may be basic, but their packaging demands certainly are not



"This was a big project," Rocca explains. "The market in India started livening up in 2018 and, based on our experiences with the customer – for whom we installed the first noodle line 15 years ago in another country – we were asked to develop a solution for its new site. Part of the reasoning from both sides being that we could bring all of our experiences and technological evolution over the past 15 years and deploy them in this new site.

"There are two approaches to this type of application," Rocca elaborates. "The question is do you side load,

or do you top load? Our solution specified side-loading for a number of reasons, but primarily because in this application you gain better control of the product, especially considering the throughput levels. The customer had also experienced mis-packing problems from a competitor's top-loading machine at another group plant, so was not eager to face the same issues." Cama's solution comprised two of its Breakthrough Generation (BTG) IN Series case packers, each of which would be fed by three high speed in-feed lines. The important figures being an infeed of 990 packs per minute and an output of 11 RSC cases per minute.


"Not everyone can package cleanly and successfully at this rate," Rocca enthuses. "Space was a key consideration too. We had to combine multiple loaders feeding one machine quite a limited bit of real estate. With such a prodigious in feed rate – being handled by the machine's triple independent loaders – we also had to design in a buffer to prevent microstops. Typical buffers would be built for 20 to 30 seconds, this one had to be 60 seconds!"

In operation, each infeed supplies products at the rate of 330 per feed. The product packages are turned on their edge and enter a racetrack, which creates the first batch configuration. These then feed into a stacking device, which assembles the product stacks. Once the packaging configuration completed all products are transferred into mono-axis conveyor, which takes production from each



in feed (with a slot for each) and, once full, advances them to the case packer, where a pusher pushes the noodle collations into the pre-assembled carton. The cartons are sealed using glue, tape or both before being checked for integrity and passed to the outfeed. "We developed a special pusher system to push the noodle packs into the cases," Rocca explains. "Insertion of 96 packs or more has to be handled very carefully, otherwise the product losses that afflict top loaders can occur. The key to truly lexible noodle packaging is the ability to package both single and multipacks (up to 6) in the same case, with very little intervention. As a rule of thumb, multi in-feed machines do not normally like product variation, but our IN Series solution can actually handle anything from 40 to 100 packs in same case style. We have also developed a way to very quickly adjust the loaders, keeping a complete changeover down to just 32 minutes, which, in anybody's books is a very quick time, especially for a machine with three in feeds AND a case packer!"

Cama's Breakthrough Generation (BTG) concept is setting the standard in secondary packaging. Machines deliver modular, scalable frameworks that offer easy entry and access, coupled to a hygienic machine design. Within this framework, contemporary automation solutions, including advanced rotary and linear servo technology, is tightly coupled to in-house-developed robotics, to deliver the all-important flexibility and adaptability required by modern packaging operations. "Automation and Industry 4.0 capabilities were another important facet to this project," Rocca explains. "Our customer is front runner in the deployment of connected manufacturing solutions and, it could be argued, its size and global reach means it also dictates the direction that many other companies follow.

"In this instance," he concludes, "Augmented Reality capabilities were part of the wish list, something that has really been bought to the fore over the last few months, with social distancing and travel restrictions bringing almost all correspondences online. Our deployment of contemporary automation solutions means that these Industry 4.0 capabilities are in easier reach for customers and we have seen really positive real life results recently, where they have proved vital for FATs, training, maintenance and operation, all delivered and performed virtually!" 

www.camagroup.com



पैकेजिंग मशीनों और रोबोटों की अपनी अनूठी श्रृंखला के साथ 1981 में स्थापित कामा समूह, उन्नत प्रौद्योगिकी अंतःपंक्ति पैकेजिंग सिस्टम का तेजी से बढ़ता अग्रणी आपूर्तिकर्ता है, जो लगातार नवीन समाधानों में निवेश कर रहा है। हम प्राथमिक पैकेजों से पैलेटाइजिंग और फूड (बेकरी, कन्फेक्शनरी, कॉफी, आइसक्रीम, डेयरी, रेडी मील, किराना), नॉन फूड (पर्सनल, हेल्थ एंड होम केयर) और पेट फूड उद्योगों की सेवा के लिए तैयार किए गए प्राइमरी पैकेज तक पूरी तरह से एकीकृत पैकेजिंग लाइनों की पेशकश करते हैं। हमारा वैल्यू पैक -पैकेजिंग कंसल्टिंग, प्रोजेक्ट मैनेजमेंट, सस्टेनेबल एफिशिएंसी, आपटर सेल्स सर्विस और सपोर्ट पर आधारित है।

कामा पैकेजिंग विभाग पैकेजिंग पेपरबोर्ड और कार्डबोर्ड के डिजाइन और परीक्षण में तीस से अधिक वर्षों का अनुभव प्रदान करता है।

हम उत्पाद की विशेषताओं, पैकेजिंग सामग्री और अंतिम उपयोगकर्ता की आवश्यकताओं के संबंध में सर्वोत्तम संभव पैकेजिंग समाधान का अध्ययन करते हैं, जिसमें स्थिरता और सामग्री लागत दोनों को कम करना शामिल है।

दुनिया भर में 6 सहायक (अमेरिका, चीन, ऑस्ट्रेलिया, फ्रांस, ब्रिटेन और उत्तरी यूरोप) और वार्षिक अनुसंधान और विकास निवेश (वार्षिक कारोबार का 5% से अधिक) 4.0 उद्योग में, जिस में प्रक्रिया वर्चुअलाइजेशन, इंजीनियरिंग, मशीन कमीशन, तकनीकी समाधान, अल्ट्रा-कॉम्पैक्ट रैप-अराउंड केस पैकिंग मशीनों की एक नई श्रृंखला और रोबोटिक्स में नवाचार शामिल हैं।



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Sarchio: when organic and gluten-free is synonymous with goodness

by
Gabriele De Luca



Cesare Robert
CEO of Sarchio



Even before ecology and “healthy eating” became topics of current interest and received wide attention from the media and companies, Sarchio made environmental sustainability and food wellness its mission. The first Italian company to offer organic and gluten-free food, Sarchio has been committed since 1982 to the production and marketing of organic, healthy, and natural food. Starting from the typical foods of the initial traditional Italian cuisine - which have remained within the range - Sarchio has specialized in more innovative products, dedicated to those who follow particular eating styles or are intolerant to certain ingredients, with a focus on gluten-free and vegan.

To learn more about this innovative company, we interviewed Cesare Roberto, CEO of Sarchio.

Your company has been committed to sustainability since its origins, at a time when attention to ecology and respect for the environment was not yet as widespread as it is today. Where does this attention come from?

Respect for nature and the environment and the spread of the culture of a correct and healthy diet have always been our company mission, to which we add a careful selection of the best organic raw materials, for safe and healthy products.

Talking about the introduction of regulations related to organic products, you touched on a fundamental point: how did the introduction, in 1991, of the EEC Regulation regulating organic farming methods influence your reality?

Before that date, there were several agencies in charge of verifying that foods called organic met certain requirements in the production, processing, and transformation of raw materials. The introduction of a Community Regulation that regulates the method of organic farming and defines univocal “rules of conduct” has allowed to spread a real culture of “organic” and to define a set of univocal rules to be followed by everyone.

Another important date for the development of Sarchio is 2004, the year in which the company began the process of



obtaining authorization from the Ministry of Health for the production of gluten-free dietary foods. Even more decisive was 2006, when with the arrival of the authorization Sarchio became the first Italian company to produce organic and gluten-free foods. Where does the attention to gluten-free come from?

Sarchio has always promoted a healthy, balanced diet with a high nutritional value. The research and the intention to offer innovative products with a high health and nutritional content has spontaneously translated into the development of a line of organic products suitable for those who follow special diets related to food intolerances: today an entire production area of the company is dedicated to the production of gluten-free products.

Researching goodness and ensuring a high standard of quality remains the guiding principle of the entire range of products. All products are designed to be good and suitable for the whole family because they are produced first of all with strictly selected organic raw materials. Our motto is "Good for everyone because they are organic and also... gluten-free".

What are the main markets in which the company operates? Do you also export abroad? Is there a typical customer?

As far as our distribution is concerned, today we are 90% in Italy and 10% abroad.

Sarchio's "typical customer" is certainly the consumer who supports a lifestyle based on health, wellbeing, and sensitivity to environmental issues, who prefers organic food and its natural and simple flavours as an alternative to conventional food. The entire range includes almost 180 organic products, including a gluten-free line (about 90 items) refundable by the National Health System and a vegan line: a complete range ideal for coeliacs, vegetarians, vegans, adults, children, and anyone who wants to make a healthier and more balanced diet a real lifestyle.

So far we have talked mainly about the choice of raw materials, but committing to the environment and ecology is not limited to the choice of sustainable products, it is a complex process, made of different stages. It starts with production, goes through transportation, packaging,






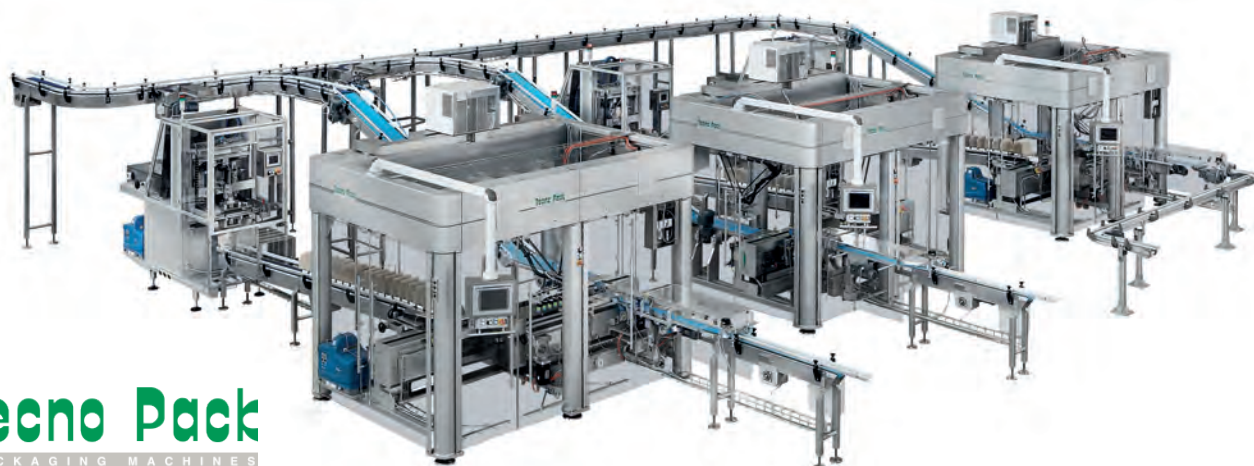
distribution, and sales. How does Sarchio take care of these different aspects?

The use of “clean” energy with a perspective of energy saving and environmental sustainability has been a priority that has conditioned the plant choices. Our company headquarters is built according to innovative building criteria, energy efficiency and low environmental impact, also from the point of view of the systems: we have a photovoltaic system with a total power of about 110,000 kWh/year that covers almost all the energy needs of the structure, and thanks to special compressors we recover hot water for the production areas.

Packaging is an extremely important and controversial issue, as it is closely linked to the production and disposal of plastic materials. How does Sarchio reduce the impact of its product packaging on the environment? Do you use particular technologies in this area?

We have been working for some years on gradually replacing the external plastic present in the packaging of our products with paper. We have eliminated 60% to 70% of plastic from the wrapping of cookies and breakfast cereals and this change will involve a large part of the Sarchio range. We pay particular attention to the packaging phase of the products where recyclable materials such as cardboard and paper tape are used, trying to limit the use of non-recyclable materials to a minimum.

As far as the packaging of our products is concerned, our partnership with Tecnopack, a company that produces machinery for the packaging and preservation of products with which we have been collaborating since 2012, is fundamental. It was together with Tecnopack that we accepted the challenge of trying to minimize the impact of packaging, making it 100% recyclable. A challenge that today, thanks to this strategic partnership, we can consider won. 

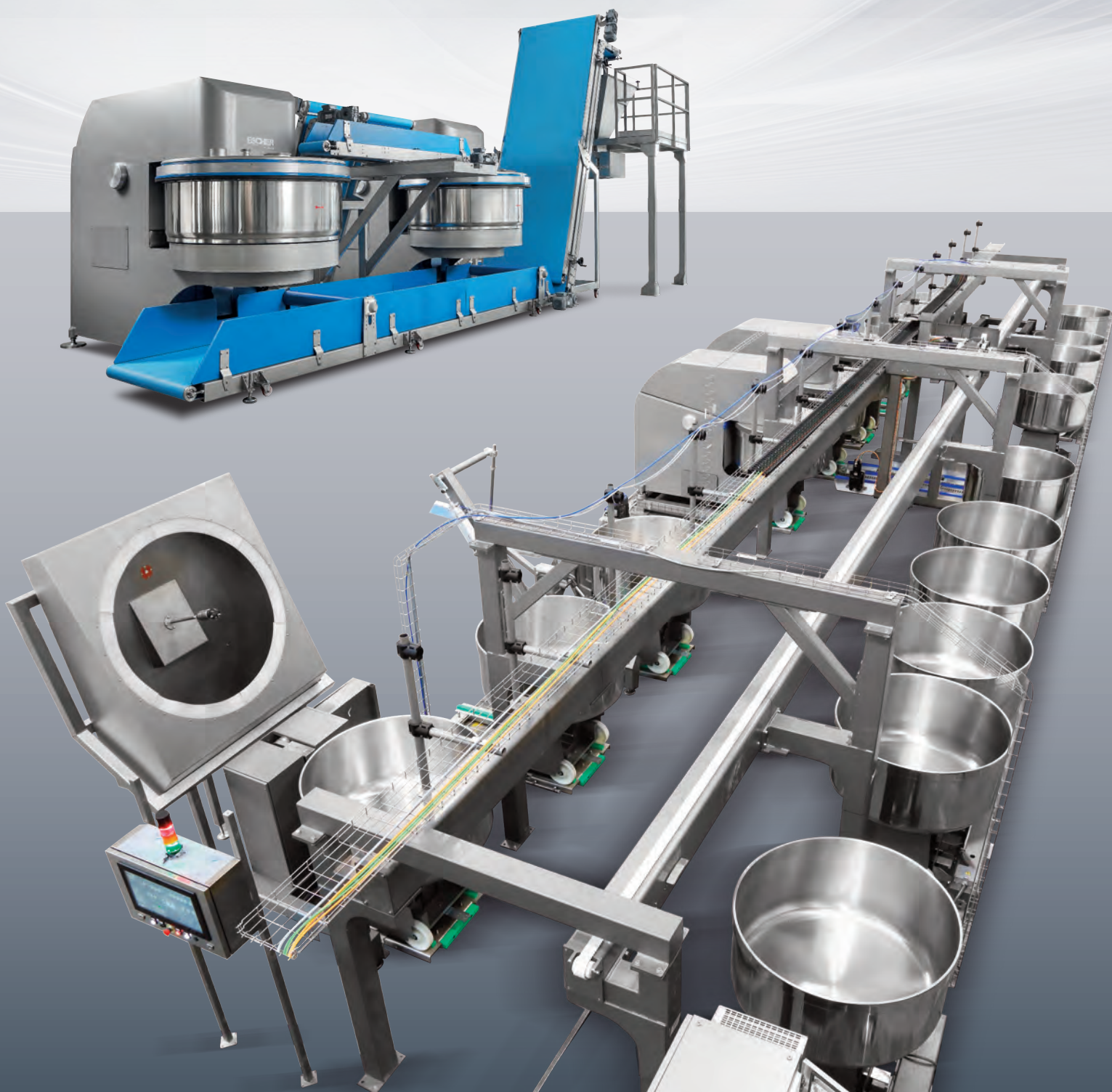


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PACKAGING MACHINES



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**Robotic mixing and
bowl handling system**



Altech: thirty years dedicated to labelling

Founded in September 1991 by a small, but dynamic team of individuals led by the industrious and trailblazing Piero Salvini, ALTECH gradually established itself as a leading company in the production of labelling machines, constantly challenging itself to create, adapt, and implement the most diverse and innovative labelling solutions and satisfying the needs of the most disparate food and non-food sectors.

It is thanks to these three decades of experience that the company, now led by Paolo Salvini, the second generation of leadership which has actively contributed to the company's development, today boasts a brand new, 3500 square-metre facility located just outside of Milan, as well as an extensive market that is 80% overseas and supported by 80 distributors and three additional branches located in Great Britain, the United States, and Argentina.



Today the company boasts a brand new , 3500 square-metre facility located just outside of Milan, where the most innovative labelling solutions for all food and non-food sectors are built and assembled.



The Bareggio facility builds and assembles approximately 2000 labelling machines per year, both large systems and small stand-alone machines, and employs more than seventy people.

In short, the company produces labelling systems that combine manufacturing quality with ease of use and reliability, providing original solutions that have been developed through scientific research.

These characteristics have contributed to ALTECH's systems being adopted by a growing number of clients, which, in turn, has allowed the company to become one of the recognised world leaders in its sector.

After two years in which it was impossible to meet, we were finally able to sit down with Paolo Salvini and chat about how this most recent period has been for the company as well as what its immediate prospects are.





A CHAT WITH PAOLO SALVINI

Mr. Salvini, this special anniversary is taking place during a very unique moment in history. After 2020, which was characterised by a sudden pandemic, it seems that we're finally seeing the light at the end of the tunnel. How did Atech handle this period?

Overall it went well. Initially, like everyone else, we were shaken and had to understand how to deal with such an unexpected event. But soon our company was included, according to the Ateco codes, on the list of those that were able to continue doing business, being essential to industry.

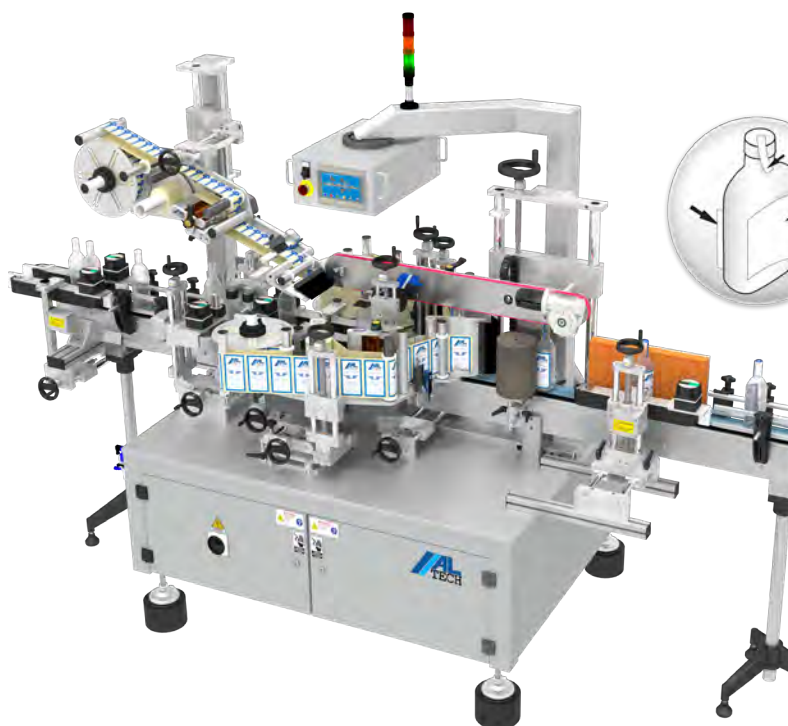
Therefore we were able to continue working, progressively weathering all of the inevitable challenges that came with the situation. But after a settling in phase, our activities then continued without interruption, and I'm satisfied to say that overall things didn't go badly at all.

Some sectors, like the packaging sector for example, have in fact grown in recent years. Is this true for the labelling sector as well?

In 2020 we actually didn't experience any drop at all in terms of sales and revenue, while 2021 is turning out to be a year of growth. The market is responding very well and our sales numbers have definitely increased. The only problem is the scarcity of raw materials and the related rise in costs, but overall we can't complain, seeing as how, regardless, we're among those sectors that have been less affected by the crisis. In fact, in addition to being active in the cosmetic and manufacturing sectors, we work quite a bit with the food and pharmaceutical sectors as well, which certainly haven't experienced any downturns.

What industrial sectors have given you the greatest satisfaction over the past few years?

Definitely the food sector, where there's been significant growth. The growth has actually been global. Labelling machines are objects with a very broad spectrum: everyone needs them. Everything that's produced needs a label.



We have the privilege of being useful to every product sector, and this allows us to have excellent stability. If one sector slows down, there's always another one that's picking up. Not only that, but we have an excellent sales network that includes about eighty dealers that supply 50 countries worldwide. This geographic distribution also ensures stability, because when demand drops in one area it tends to rise in another.

Speaking of which, what percentage of your revenue comes from exports?

About 75% in value and 80% in machines.





What trade shows will you be participating in in the near future?

The next trade shows we'll be participating in are Ipack-Ima, in May 2022 in Milan, and Pack-Expo in Chicago in October. Then in 2023 we'll be at Interpack. We're already getting ready for Ipack-Ima and are choosing which machines to bring. I think the trade show will go well, both for us and for the event itself. The long wait has built up expectations that I believe will be met. In general there's a strong desire to resume normal activities and people are very enthusiastic. We'll finally see our clients in person again and will get to display our machines the way we like to and the way we always have.

We like to do business face-to-face and show our machines in person. We can't wait to resume in-person activities.

ENOUGH WITH VIRTUAL MEETINGS!

Are there any new products in your labelling solutions?

We'll be presenting something new at Ipack-Ima. But right now we're focusing on our clients, who we work very hard to satisfy, scrupulously respecting delivery times.

Speaking of clients, do you have any new ones?

Yes, we have new contacts in areas like the Far East and Eastern Europe, where previously we weren't present, but we also have new clients in Italy.

There's definitely a steady increase in new clients.

Our work is, after all, to produce innovative industrial labelling machines, a focus which is expressed in the name of our company itself: ALTECH, Advanced Labelling Technologies.

www.altech.it



Exports in numbers

- ✓ 75% of revenue
- ✓ 80% of machines
- ✓ 80 distributors around the world

TURNING PROBLEMS INTO OPPORTUNITIES



Strong of values that have always identified it Universal Pack has tried to turn these new problems into chances for growth. Here is how it was.

How did you face the problem of distance with customers considering the important export share (almost 90 %) of your business?

We have always been a pioneering company in terms of technology and digitalization.

The pandemic has represented the chance to boost further and make all those less adopted procedures standard: with this we mainly refer to remote FAT protocols, remote machinery installation and technical training.

We did not have to create new channels or provide new technology, but to expand the existing tools and procedures that were used in case of impossibility of meeting our customers at first hand.





2020 has undoubtedly been a special year, bringing unprecedented challenges. The restrictions on travels, meetings and daily activities has impacted to a large extent every industry

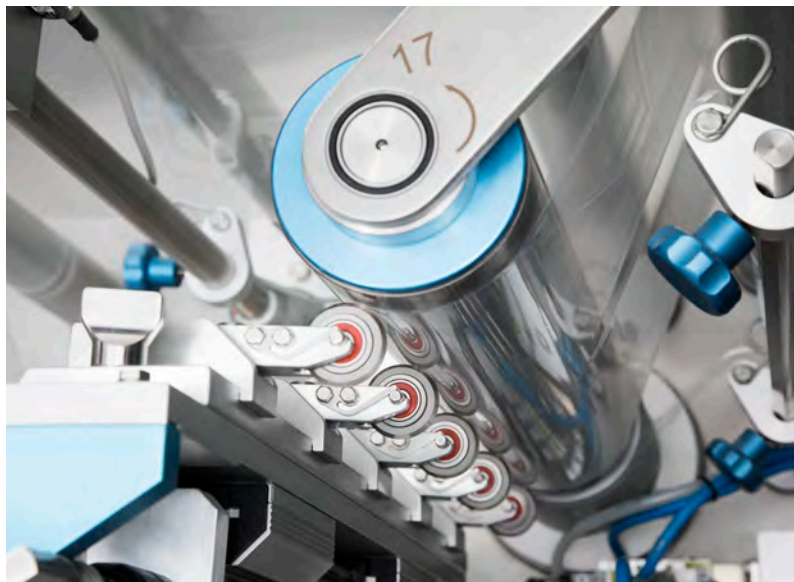
We offer assistance packages with augmented reality and e-commerce for purchasing spare parts.

We also provide monitoring plant performance by means of 4.0 and subsequent optimization of the productivity through proprietary algorithms as for machine learning and predictive maintenance.

We are in a very complex field, technically speaking, how is it possible to manage communication with customers effectively in this time?

The communication with customers is the most important part of the whole process: the final solution effectiveness and completion time depend on the quality of it.

We are equipped with specific tools for each phase of the negotiation and after sales. For instance, design reviews take place remotely on a “twin” machine of the one that the customer will receive. Moreover, we boast a factory laboratory (built in over 30 years of





investments) for scientific analysis of products and film laminates.

There are also some stock machines, a white room for simulating specific environmental conditions and equipment for testing and simulating the conditions at the customers' premises. Besides that, we produce more than 80% of machine components in-house.

Over the years we have been able to develop a very efficient ecosystem in terms of flexibility and responsiveness.

Has the market changed this year?

There have been some changes on the market: this year requests have increased on products such as hand sanitizer, swabs, food single dose products like grated cheese and olive oil. The rise was due to the new global hygienic standards.

However, the level of requests is generally aligned with the latest years trend. Notwithstanding the peculiarities of 2020, we have kept up with the financial report forecast, confirming the annual growth in terms of turnover, new customers and number of workers.

With regard to sustainability, do you think that this year has been positive?

Absolutely. Besides the pandemic issue (that indirectly brought benefits to the environment in term of emissions) we have made great progress in terms of machines carbon footprint reduction and packaging with recycled and recyclable film laminates, thanks to collaboration with suppliers and research institutes. 🏢

www.universalpack.it



पैकेजिंग के क्षेत्र में यूनिवर्सल पैक एक अंतरराष्ट्रीय संदर्भ है। कंपनी के पास खाद्य, फार्मा, रसायन और कॉस्मेटिक उद्योग के लिए एकल खुराक उत्पादों की पैकेजिंग के लिए लंबवत मशीनों और पूर्ण स्वचालित लाइनों के डिजाइन और निर्माण में 50 से अधिक वर्षों का अनुभव है।

यूनिवर्सल पैक 150 से अधिक देशों में मौजूद है और अभी तक 8000 से अधिक सिस्टम स्थापित कर चुकी है। किसी भी प्रकार के पैकेज के लिए यह कंपनी अत्याधुनिक समाधान प्रदान करती है: स्टिक-पैक, चारों तरफ सील किए गए पाउच, पैक और कार्टन के आकार के अनुसार पैकेजिंग।

वर्तमान में, नवाचार के लिए मुख्य लक्ष्य निम्नलिखित पर ध्यान केंद्रित करते हैं: पुनर्नवीनीकरण और/या पुनर्नवीनीकरण सामग्री के साथ पैकेजिंग, 4.0 वातावरण में मशीनों का एकीकरण, ऊर्जा खपत अनुकूलन और पर्यावरणीय स्थिरता।



Food grade plastic packaging

Nestlé Mexico, Greenback and Enval are to install the first plant in Mexico to achieve full circularity of food grade plastic packaging.

- In the first phase, the project will process up to 6,000 tons of flexible plastic packaging in year one.
- Nestlé Mexico is the first consumer goods company in the country to back the circular economy by guaranteeing access to recycled food-grade plastics.

Nestlé Mexico announced the signing of an agreement, the first outside Europe, with the UK company, Greenback Recycling Technologies, to install a chemical recycling plant capable of processing flexible plastic packaging. This will address the challenge of post-consumer plastic waste that is difficult to recycle in the country, thus contributing to promoting a circular economy.

The plant will employ an innovative microwave-induced pyrolysis technology developed by Enval, a UK chemical recycling company, to transform valueless plastic packaging into pyrolysis oil that can be used in the petrochemical industry to manufacture new products with post-consumer recycled content. Enval's technology is unique in that it also allows the recycling of aluminum from ultra-effective but hitherto impossible-to-recycle packaging.

The ambitious project will enable circularity of up to 6,000 tons of flexible plastic packaging in the first year, with expected sustained growth in both volume and installed capacity in the country. In addition, Nestlé will be investing in the adaptation to the Mexican waste ecosystem and market of Greenback's eco2Veritas Circularity Platform, which provides complete traceability of the neutralisation and recycling process.

"Making safe recycled plastics for food packaging is a huge challenge for our industry. Therefore, in addition to minimising the use of plastics and collecting waste, we want to close the loop and make more plastics infinitely recyclable. This project with Greenback and Enval fully supports the mission of ensuring that our plastic packaging is not only recyclable, but actually recycled; it ensures that we are drastically reducing plastic waste pollution and supports our work with lo-



cal communities," commented Fausto Costa, CEO at Nestlé Mexico.

The Swiss company's alliance with the advanced recycling technology companies (focused on certified circular solutions for packaging waste) is part of the objective of reducing its plastic footprint in the environment and continuing the path towards the goal of achieving a waste-free future.

Philippe von Stauffenberg, founder and CEO of Greenback, said: "This project in Mexico will tackle the unresolved problem of turning multi-laminate and mixed plastics that are difficult to recycle into a recyclable waste stream. The aim is to reduce the challenges that exist in packaging recycling, transforming these waste resources into pyrolysis oil that can be used for the manufacture of certified recycled food packaging."

Carlos Ludlow, founder and CEO of Enval, commented: "This collaborative project with Nestlé Mexico and Greenback shows the importance of teamwork between companies from different parts of the value chain in facing the challenge of plastics in the environment. At Enval, we know that plastics are not the enemy but are materials that improve our lives but must not end up as pollution. We are very pleased to know that our first plant, in collaboration with a company as recognized as Nestlé and in partnership with Greenback, will soon be operational in Mexico."

In April 2021, Nestlé Mexico became the first company in the country to neutralise all the equivalent plastic from its post-consumer waste, on a voluntary basis. With this new agreement, the world's leading company in Nutrition, Health and Wellness endorses its commitment to make use of innovation and technology to move from virgin plastic to recycled food-grade plastic, in line with the vision of finding effective solutions to prevent its packaging from ending up in landfills or as garbage.





Made in Italy in favour of Ukrainian food processing

Ukraine is one of the countries that, since the beginning of 2020, has most increased the volume of imports from the European Union. This is revealed by the latest report on trade in agricultural products prepared by the European Commission. Defined for centuries the granary of Europe, Ukraine is famous for having one-third of the richest soil in the world and for being among the top ten major producers of soft commodities. These are considerations not to be underestimated when you start thinking about internationalization.


Choosing this country as the recipient of an export action in the food processing sector, means contributing to the development of the mechanization of a territory with a strong agricultural vocation, in which definitely stimulating scenarios are outlined and in which there is huge space for Italian exports' placement. In fact, the Made in Italy of food processing offers highly innovative systems and pioneering equipment, able to meet the needs of Ukrainian SMEs, always looking for Italian business partners, also facilitated by an important and consolidated import-export, which is constantly growing. We recall that there are more than forty types of products meant for the food processing industry in Ukraine, including the sector of processed vegetable oils, vegetable and fruit processing, with the production of tomato and apple concentrate, flour products, confectionery and dairy products. From all this, a high demand for food processing equipment and machinery comes, which some Italian entrepreneurs have already begun to fill, gaining benefits. According to data provided by the Ukrainian Statistics Service, Italy is in first place for the supply of dryers. Currently, most of those used in the country are obsolete and do not cover the needs of Ukrainian users, so the market will be increasingly receptive to such facilities. This is also true in the agri-

cultural machinery sector, in which local producers point out the lack of new technologies. For this reason, the need for these tools is met by imports, in which Italy ranks fourth as a supplier. The opportunities that arise from this scenario are therefore several and push more and more Italian companies to approach Ukraine, but a failed planning of a correct strategy of action does not always lead to the achievement of the fixed goals.

For years, the Italian Chamber of Commerce for Ukraine has supported companies in establishing business relationships with companies in the country of destination and promotes informed internationalization





processes. For 2021, the Chamber Institution has designed the Food Processing Ukraine program which, in addition to training through a course about internationalization of sales, aims at three main goals, which mark the phases of the project: promotion, web contact and definition. Subscription to an online platform by all participating companies will be a window for the products and services that will be internationalized. It will give business managers the opportunity to get in touch with Ukrainian realities with whom they will be able to dialogue, maximizing the opportunities of concluding business, thanks to the online trade expo, which will be held from 2nd to 5th March 2021. Four days in which participants will be engaged in enjoying B2B meetings, conferences, exhibitions and seminars, just like they did at physical expositions. This event will open doors to following digital events with the aim of providing entrepreneurs with right tools for achieving success. With the arrival of summer and the hoped decrease in infections, the Chamber of Commerce will be happy to guide the protagonists on a business mission in Ukraine, with personal meetings with the companies with which they have come into contact in the preliminary phases of the project: the deserving conclusion of this rich program. 

 **FOOD
PROCESSING
UKRAINE
2021**

ONLINE EXHIBITION / 2 – 5 MARZO 2021





COMPLETE PACKING SOLUTION FOR DRIED FRUIT SNACKS



This text takes us through the 70-years of one of Italy's machinery manufacturers - Officina Meccanica Sestese (OMS) - right from the beginnings up to the present day. We want to illustrate how what was a small artisan company has become an important engineering company with more than 10 branches and representative companies around the world.

FOUNDING THE COMPANY 70 YEARS AGO

Officina Meccanica Sestese was founded in 1949 by Maurizio Rossi and Luigi Cristina, during the difficult period after the second World War. At that time, the company's activities

were dedicated to equipment and accessories for furnaces for the production of bricks.

OMS' products soon had an important place in the market, and in 1958, new premises were opened in Arona (NO), where, the production of equipment for furnaces continued with new technology. In 1971, OMS patented the 'Forca Artiglio' for the handling and transport of bricks, with sales covering five continents.

Following on from this important growth, and newly developed products, the new premises in Paruzzaro (northern Italy, near Novara), were inaugurated in 1980.

During 1990, OMS designed and manufactured the first strapping head - the R10 - the cornerstone product that has enabled Officina Meccanica Sestese to become the leading reference company in the sector for automatic strapping.

DEDICATED TO THE PACKAGING SECTOR

Since then up to the present day, a number of new machines have been designed and built: heat shrinking and stretch hooding machines,



wrapping machines, new modular strapping heads, as well as strapping machines specifically for the paper and cardboard packaging sector. Last but not least, the development of special lines dedicated to other sectors. Working in the most diverse productive and applicative sectors has increased considerably OMS' global reputation, leading it, today, to become an engineering company with more than 10 branches and representative companies around the world.

The cornerstones on which OMS is founded are its history - of course - as well as its vast number of technological solutions, combines with solid relationships with clients who want to invest in strategic technology for their production processes, and therefore require partners that are well-prepared and who are able to provide machinery with guaranteed reliability over time. OMS is, in fact, able to offer a complete series of machines and plants for end-of-line packaging, such as strapping, stretch & shrink hooding, wrapping.

RESPONDING TO THE MARKET WITH RELIABILITY, EXPERIENCE, FLEXIBILITY

Reliability, experience and flexibility are three important characteristics that enable OMS to respond to today's market demands, from the most simple strapping machine up to the most sophisticated packaging plant.

All this is made possible thanks to OMS' many years working in this market sector, as well as the large number of ad hoc solutions studied for its clients. The important results achieved by the company are also thanks to three generations of businessmen who have continued to be involved closely with the market, with the vision of a future characterized by innovation and continuous improvement.

2019 AND THE FUTURE

OMS is now undergoing a phase of transformation from a high level 'artisan' company to an industrial enterprise, involving a series of organizational, design, commercial and production choices, aimed at guaranteeing – more and more – top-level service to its customers and consolidating its position in its target markets.

During this renewal process, OMS will also celebrate its 70th year of foundation with a series of actions and events specifically thought of for this important moment

Our motto: “Because looking back, we don't always remember all the steps of our journey, but we recognize the footprints we have left. And we look ahead to our new goals.” 🏛️

www.ishidaeurope.com

FLEXIBLE, SINGLE-PLATFORM PACKAGING SOLUTION DELIVERS FORMAT AGILITY AND DELICATE HANDLING OF CRAFT-MADE ITALIAN CAKES

Livetech selected Rockwell Automation solutions to build a secondary packaging line for Galbusera-Tre Marie, an Italian brand with a long history in the bakery industry and with a strong commitment to preserving the craft-made quality of its cakes.

Background

For Galbusera, an Italian company formed in 1938 in Morbegno, in Valtellina, the quality of its baked products – biscuits, snacks and crackers – has always been a priority. In 2014 Galbusera acquired Tre Marie, a Milan-based brand with a long tradition in the production of Italian panettoni and colombe and launched an important investment plan to modernize its manufacturing lines. Since January 2018, Tre Marie leavened products – colombe and panettoni – have been produced in the new plant in Vellezzo Bellini. Tre Marie products have always been characterized by their craft made taste, which is the result of a long and delicate production process: “Seventy-two hours are needed to produce a panettone or a colomba,” Franco Ronconi, Technical Director at Galbusera, explains. “Our technicians keep the craftsmanship of our products alive even if the process is highly automated: we bake and package 1,800 colombe per hour and 2,200-2,400 panettoni per hour.”

Challenge

When Galbusera transferred the production line from the Tre Marie headquarter in Milan to the new production site, a major renovation involved the leavened packaging process. “We were looking for a technology supplier that could give us a post-installation support too and we found out that Livetech could be the right one,” Ronconi says. Livetech, a company delivering engineering, consultancy and production of complete packaging systems, proposed an innovative solution for the secondary packaging of panettoni and colombe; a system based on an automatic wrapping line that forms a display tray (couvette) from a cardboard die-cut. The line includes three robots that place the packed products on the tray.

As Federico Scornaienchi,
Area Manager at





Livotech, explains: “The display tray is a very smart solution for the employees in stores, as they don’t have to extract the products from any closed box to expose them; the so-called couvette is therefore a plus for Galbusera when contracting with deliverers and an interesting marketing tool, because the product is immediately visible and accessible to the end user as soon as the tray is placed in the store.”

Furthermore, in the secondary packaging process, the new solution offers several benefits compared to the American box, which was previously used by Galbusera. It is more flexible, because a cardboard die-cut can be used to form different tray models, while the American box has standardized dimensions; and it helps to save materials used for the secondary packaging, because additional background and cardboard internal dividers are not needed.

Galbusera decided then to transform its secondary packaging concept radically. The most challenging step of the project concerned the ability of the line to realize the right batches required by Galbusera sales office and to meet the palletizing requirements: “We had to respect the quantity per sale unit and per pallet,” Scornaienchi explains. The manipulation of the finished product was another peculiarity that Livotech and Galbusera had to cater for: “We had to comply with severe constraints in moving the product along the secondary packaging and transporting steps.” Ronconi points out. “Products can’t be allowed to deteriorate in their package, in terms of shape and appearance. Tre Marie panettoni and colombe are appreciated for their high quality and customers who choose them expect the same quality even in the packaging.”

Robots have to load the tray not only with carton-packed products, but also flow-packed products, which are conceived to be sold in outlets. “In this second case, products in bags have to

be picked and moved more delicately, because they are less protected than they are in a carton box, and we initially had some perplexities: could a robot deliver the same care as an operator's hand?" Scornaienchi continues. "Thanks to special gripping tools and advanced control configuration, the robots are able to offer delicate handling, preserving the product in both cases."

Solution

Livetechn designed a multi-format line for Galbusera, in order to form, fill and close the trays. The first station comprises an automatic unit that loads and forms the die-cut cardboard. Three robotic islands are the core of the line: they take the products coming from the conveyor belt – which is connected to the primary packaging machine – and place them on the tray in the correct numbers. Different gripping tools are used depending on the package of the single product (case or bag).

When a format changeover is needed, the robots rotate towards the operator, who can replace the gripping equipment.

The tray then passes to a weighing station, where a cell verifies weight parameters: if they respond to set requirements – that is, the tray contains the right quantity of pieces – they move to the next robotic isle, where the robot puts glue to the edges of the cardboard die-cut and folds them,

forming a containment perimeter. Then another piece of cardboard is placed above to cover the products. The trays are stacked one on top of the other, up to a maximum of three, and move to palletizing station.

The automation architecture implemented by Livetechn is based on an Allen-Bradley® CompactLogix™ 1769-L36 programmable automation controller (PAC) from Rockwell Automation. This automation platform helped to minimize installation and start-up time in Galbusera plant, thanks to a common software environment and an integrated axis control, which met the precision and speed requirements of the robotic islands.

Two Allen-Bradley Kinetix® 5500 servo-drives are connected to the controller, while four Allen-Bradley Kinetix single-cable VPL servo-motors are connected to the servo-drives. An Allen-Bradley PowerFlex® 525 variable-speed drive, an Allen-Bradley PanelView™ Plus7 graphic terminal and several Allen-Bradley POINT I/O™ modules complete the architecture.

The power system is a Rockwell Automation one too and is based on 1606 Series-XLS Switched-Mode Power Supplies. "Quality, integration and ease of use are the values we share with Rockwell Automation when it comes to selecting the right technology for a specific application," Scornaienchi says. "The CompactLogix platform helped us to build a flexible multi-format line."





Thanks to Livetech and Rockwell Automation, Galbusera now has a more automatized secondary packaging process without compromising the high quality for which its products are appreciated.

The new solution offers several benefits compared to the American box, which was previously used by Galbusera.

A cardboard die-cut can be used to form different tray models

Results

Thanks to Livetech and Rockwell Automation, Galbusera now has a more automatized secondary packaging process, without compromising the high quality for which its products are appreciated. Ronconi points out that in Galbusera automation is adopted where it's worth: "The secondary packaging of small batches is still manual," he says, "and our operators have the possibility to control and supervise the line." The Rockwell Automation platform helped to improve the flexibility of the secondary packaging line too: "We initially wanted to standardize the trays, but while developing the system, we changed our minds and chose a flexible solution, that had to be able to adapt the bottom of the tray according to the quantity of the pieces to be contained."

The CompactLogix PAC with integrated motion allows operators to perform quicker format changeovers and doesn't require the plant to be stopped upstream. Preserving and handling products correctly throughout the process is a must for Galbusera and thanks to Livetech and Rockwell Automation the Italian company got it: it can be sure that its colombe and panettoni come to the consumer in perfect conditions.

Challenge

Historic Italian bakery needed an upgrade path that balanced modern automation agility with delicate handling of its baked products.

Solutions

A Rockwell Automation solution was installed, which included:

Allen-Bradley CompactLogix programmable automation controller

Allen-Bradley Kinetix 5500 servo-drives

Allen-Bradley Kinetix single-cable VPL servo-motors

Allen-Bradley PowerFlex variable-speed drives

Allen-Bradley PanelView Plus7 graphic terminal


Allen-Bradley POINT I/O™ modules

1606 Series-XLS Switched Mode Power Supplies

Results

Common software environment

Integrated axis control that meets the precision and speed requirements of the robotic islands

PAC with integrated motion delivers quicker tray format changeover and doesn't require the plant to be stopped upstream. 

www.rockwellautomation.com



Sustainable packaging: why IPI's caps employ bio-based polymers

Now more than ever sustainable packaging plays a major role within the industry. As of today, 99% of plastics comes from fossil fuels[1]. The carbon footprint from burning them is the fastest growing part of humanity's global ecological footprint - accounting for 60% of the total[2]. To reduce mankind's reliance on fossil fuels is not simply a moral imperative: it is the only way out of the climate crisis. That is why sustainable packaging initiatives, such as IPI's bio-based caps, are paramount.

IPI's openings are the latest introduction in IPI's sustainable packaging offer. Built out of biopolymer packaging materials, IPI's bioplastic caps have a lower carbon footprint than traditional alternatives based on fossil fuels. First, since they derive from sugarcane they have a smaller carbon footprint, with lower cradle-to-plant-gate greenhouse gas emissions than petroleum counterparts[3]. Also, their manufacturing process and disposal is more eco-friendly, as they do not contribute to the ever-growing fossil fuels' carbon footprint and are 100% recyclable as well as fossil fuel-based biopolymers.

Renewable, recyclable, bio-based caps are a peculiarity of IPI's offer. To best understand them we then proceed to explore and measure the sustainable packaging trend.

How important is sustainable packaging for consumers?

When it comes to sustainability, there's been one major change in recent years: the general public cares about it. Not only that: consumers are paying more attention and are willing to pay more.

There is convincing evidence by Nielsen [4] and McKinsey [5] that sustainability is not simply the concern of a small niche market. On the contrary, it is now a mainstream sentiment that cuts across all ages and is especially entrenched in gen zers[6] and millennials[7]. Consumers demand the adoption of corporate sustainability practices[8] in the spirit of sustainability, economic equality, and social responsibility.

This attitude has grown even more powerful during the initial aftermath of the COVID-19 crisis. A survey conducted by McKinsey [9] shows that the engagement



from customers with sustainability has deepened as a result of the pandemic. Two third of consumers state that it has become even more important to limit impacts on climate change.

What does it mean for a packaging solution to be sustainable?

To talk the talk and not just walk the walk, any packaging solution that aims at being sustainable must abide by these three principles: Renewability, Recyclability, Responsibility. A packaging is renewable if it comes from renewable sources. IPI's aseptic carton packaging, for instance, is renewable up to 90%. Precisely, it is 72% paperboard, plus bio polyethylene made from sugar cane, which IPI employs to manufacture caps and material layers. What's more, IPI has recently launched a line of paper straws and aims to provide its customers with a completely renewable packaging, with no trace of fossil fuel materials - a roadmap IPI has strongly committed to and which has also included the introduction of bio-based openings made from sugarcane biopolymers.

Recyclability, on the other hand, refers to the possibility of converting packaging waste into new materials and objects. In this regard, IPI is proud to say that its packaging is fully recyclable. By separating the paperboard of aseptic bricks from aluminium and polyethylene, raw materials are given a second life, being enabled to enter the production cycle once

again. This is what is called a circular economy. Last but not least, responsibility is about choices. IPI's aseptic carton packaging represents a responsible choice at an environmental and societal level. Environment-wise, IPI's aseptic carton packaging reduces CO2 emissions when compared to other packaging solutions. All this translates into a lower carbon footprint compared to alternative materials. On this line, bio-based caps truly stand out, as they produce fewer CO2 emissions than petroleum-based plastic caps. Also, IPI is Forest Stewardship Council®- certified as well as certified against Aluminium Stewardship Initiative (ASI) Performance Standard. As part of its enduring effort to fight deforestation, IPI has invested in tree planting in Petén, the northernmost department of Guatemala, close to the Mayan Biosphere Reserve and the famous Mayan archaeological site of Tikal. Petén has experienced the world's most rapid deforestation of any country over the last five years[10]. To make things right, all fruit trees financed by IPI will be donated to the farming families of Petén to sustain their livelihood.

Why IPI's caps employ biopolymers: taking advantage of biogenic carbon

As regards sustainability, IPI is at the forefront of the packaging industry, as it is among the first companies to feature bio-based caps in its aseptic carton packaging solutions. Using biopolymers into openings is crucial to IPI's sustainability roadmap. Thanks to biopolymers, not only do IPI's solutions produce less carbon dioxide than the alternatives, they also reduce carbon dioxide from the atmosphere through biogenic carbon. In fact, IPI's biopolymers are plant-based - precisely, they are sourced from Brazil, i.e. an area different from the Amazon rainforest, which is therefore preserved. As a matter of fact, plant-based biopolymers are equivalent to plant biomass in every way. Because of this, they "store" carbon dioxide. In fact, through photosynthesis, biomass stores CO2 and releases oxygen. Once the biomass is transformed into a cap, it retains any carbon dioxide stored inside it, actually removing it from the atmosphere.

Respect for the environment is maximum in everything IPI does. IPI is among the first suppliers to offer bio-based caps and, also thanks to this, IPI's packaging solutions are up to 90% renewable, responsibly sourced, and fully recyclable. IPI fights deforestation and supports rural and indigenous communities through its initiatives in Guatemala. To offer carton packages made only from renewable or recycled material, 100% recyclable and able to support circular economy: that is IPI's goal. 🏡





THE **PUMA** MANIFESTO

working together to the end of packaging as
an environmental issue worldwide





THE PUMA MANIFESTO

WHAT IS PUMA?

PUMA is the collective effort of the packaging business community to end packaging as an environmental issue worldwide.

WHAT IS PACKAGING?

Packaging is the activity of temporarily integrating an external function and a product to enable the use of the product.



Waste essentially is an unwanted by-product of a (manufacturing) process



WHAT IS NVC?

NVC Netherlands Packaging Centre was established in 1953 to stimulate the knowledge and expertise in packaging. Since then, we have grown into an association with over 500 member companies in the Netherlands and abroad. The packing-filling (FMCG) industry, packaging manufacturers, retailers, manufacturers of packaging machines, wholesalers, recyclers, designers, even a number of financial institutions: they all are members of the large and vital NVC business family. The NVC membership, innovation projects (like PUMA), information services and education programme stimulate the continuous improvement of packaging worldwide.

WHEN IS PACKAGING AN ENVIRONMENTAL ISSUE?

Environmental issues are harmful effects of human activity on the biophysical environment. Waste essentially is an unwanted by-product of a (manufacturing) process. The activity of packaging creates environmental issues when the resources involved, either wanted or unwanted ('waste'), constitute an environmental issue.



Environmental (planetary) problems caused by us, People, can – and will – also be solved by us, People



WHY DO WE HAVE TO ACT NOW?

Packaging has been with mankind already since ancient times in some moderate form, but the 20th century has brought a dramatic acceleration. The world 'does it' now at least 320,000 times per second and this is causing substantial environmental concerns. Packaging will only keep it's societal licence to operate if these concerns are properly addressed.

ABOUT THE MANIFESTO

This Manifesto outlines the way forward to end packaging as an environmental issue worldwide. It consists of the PUMA Model to describe the essentials of the packaging activity and its relation with the resources involved. A conceptual roadmap is presented to be applied by every individual actor and the world packaging community as a whole in a self-organising manner. Key elements are open-minded sharing of reliable information, continuous knowledge development and truly holistic innovation. Environmental planetary problems caused by us, People can – and will - also be solved by us, People.



Packaging will only keep it's societal licence to operate if the environmental concerns are properly addressed



THE PUMA MODEL

THE VOCABULARY

First, PUMA defines the activity of packaging: temporarily integrating an external function and a product to enable the use of the product. There is no Law prescribing that we must do it (packaging). For instance in recorded music, streaming services like Spotify show that we can live without. If we decide to engage in the activity of packaging, the pack-use-empty (verb) spiral P-U-E is a consequence. This results in emptied packs later in time and at a different location. Waste is defined as an un-wanted effect of a (human) activity. Consequently a collect-control step must be built-in, followed by a postulated backend (BE) process step. Mirror-wise, a frontend (FE) step is required to obtain the necessary packaging materials. Philosophically and thermodynamically and in terms of information science, the situation at the backend is fundamentally different from that at the frontend. Both processes may be described in terms of converting, though.

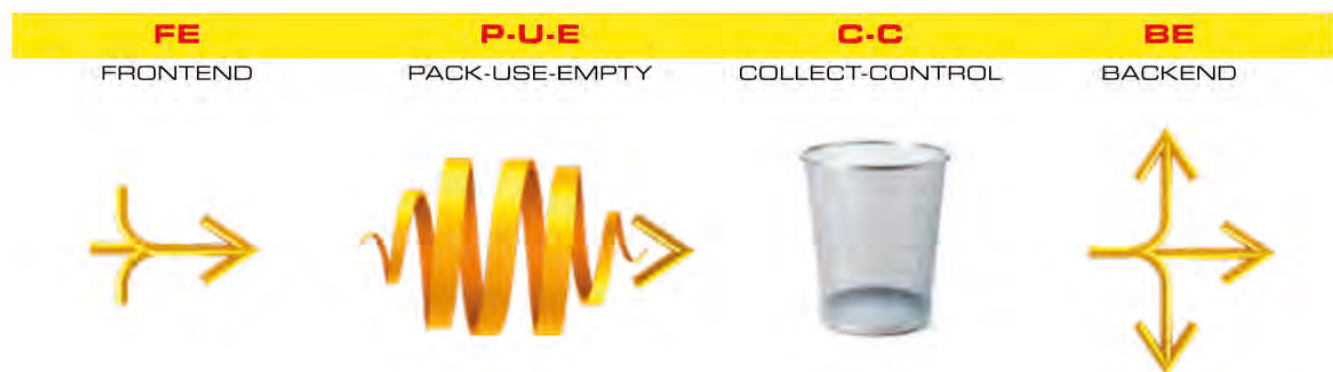


Holistic innovation is needed as we are all interconnected in packaging



ADDRESSING THE ENVIRONMENTAL ISSUES

Environmental issues may come and go, depending on the many different interactions between our human activity and planet earth. Whereas the PUMA model remains unchanged, its application to environmental issues may vary in the course of time. In this first edition of the PUMA Manifesto we focus on litter, CO₂, and (inadequate) pack optimisation. These three issues are deemed to be the most important in the current environmental packaging debate. The resulting table serves as the basis for addressing (future) environmental issues adequately.



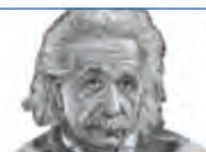
	FE	P-U-E	C-C	BE
Litter			✓	
CO ₂	✓			✓
Inadequate pack optimisation Product Packaging material + Total environmental impact				
Future issues	✓	✓	✓	✓



SUPPORTING PUMA



Success comes from deeper understanding and supplementing earlier insights



I SUPPORT THE PUMA MANIFESTO AND HEREBY PLEDGE TO:

- ✓ Reference the PUMA Model as an insightful source to address the activity of packaging worldwide
- ✓ Apply the vocabulary as used in the PUMA Model and positively contribute to possible improvements
- ✓ Contribute to the PUMA annual plenary meetings to the best of my capabilities
- ✓ Make my decisions and base my opinions on the state-of-the-art in packaging (i.e. on reliable, verifiable and up-to-date information) and using all information and knowledge that is brought to my attention
- ✓ Stimulate continuous education and training of those with a responsibility within the activity of packaging
- ✓ Contribute to helping facilitate all phases of PUMA (FE, P-U-E, C-C, BE)



*Everything flows and so does the activity of packaging;
we can put a clock back, but not the time*



MY DETAILS:

Company name

Initials and surname

Date of birth

Address

Phone

E-mail

For an overview of recent references and background information worldwide please visit www.nvc.nl/puma





PROSEAL'S FAST AND FLEXIBLE SOLUTIONS PROVE INVALUABLE FOR SOFT FRUIT GROWERS

Proseal's advanced tray sealing machines are helping growers meet ever-increasing demand for soft fruit - which has been particularly strong during the current pandemic - by providing high quality, flexible sealing solutions that also deliver on sustainability.

As soft fruit volumes continue to climb, and with the market for fruit grown in the UK now estimated to be worth over £670 million a year, manufacturers are looking for flexible solutions that can meet the demanding high-speed requirements driven by

the seasons. Equally important is the need to minimise the use of packaging materials without impacting on the effectiveness of the pack, in particular its ability to provide product protection to help reduce food waste.

Proseal offers an extensive range of high-quality manual, semi-automatic and fully automatic tray sealers, designed to be flexible and incorporating a number of unique design features that maximise speeds and efficiencies.

In addition, Proseal machines' two-minute rapid-tool-change means endless varieties of tray formats,

materials and sizes can be sealed on one machine, allowing users to quickly switch from one tray type to another.

"Our tray sealing machines offer fruit growers greater flexibility to seal different designs and sizes of trays with efficiency and accuracy," explains Proseal sales director Tony Burgess. "This, combined with our innovative technologies and production lead times, make us a world leader in tray sealing soft fruits.

"ProMotion™ our continuous infeed technology, for example, has the





potential to increase the speed of a tray sealer by up to 30%, while creating calm machine operations which ensure a smoother, more stable journey to the sealing station. This is particularly beneficial to delicate produce, such as soft fruit."

Proseal also manufactures a diverse and customisable line of intelligent conveyor systems, designed to create ultimate line control and optimisation and therefore perfect for the fast-moving soft fruit industry.

The company has pioneered several important sustainability initiatives

throughout its 23 years. Proseal was the driving force behind the replacement of traditional clam-shell punnets with top film sealed varieties, which has now become commonplace in soft fruit markets across Europe and now North America, helping to minimise plastic usage by around 45% in most cases.

More recently, the company has been at the forefront of the introduction of new recyclable and compostable trays and film for fruit that can further reduce plastic usage by as much as 96%.

"Proseal continues to strive to develop the most effective and sustainable sealing solutions for its customers," concludes Tony Burgess.

"We are proud of the many innovations we have developed for the effective and efficient tray sealing of soft fruit. And we will continue to develop the appropriate technologies to help support sustainable solutions that deliver quality."

Proseal is part of the JBT Corporation family, a leading global technology solutions provider to high-value segments of the food processing industry, committed to providing a service that surpasses customer expectations. 🏢

www.proseal.com

www.jbtc.com





Compostable bags solution ends search for fresh produce growers

Strawberry Fields Organic Farm grows an extensive range of “inspirational vegetables and herbs”. But, after 46 years of organic growing, they had struggled to find a supplier of compostable bags at an affordable price.

That was until they discovered the C BAG from flexible packaging and lidding films supplier KM Packaging and their partner Treetop Biopak.

It was with great enthusiasm that Pam Bowers of Strawberry Fields recently Tweeted: “After years in the researching, they’re here! So exciting! All Strawberry Fields lettuce as from tomorrow will go out in these bags.”

The C BAG is from KM Packaging’s C-Range of compostable bio-plastic packaging with similar properties and look and feel as conventional plastic.

It has proven to be perfect for packing the products grown by Strawberry Fields at their farm in the Lincolnshire Fens, 10 miles north of Boston at the foot of the Wolds.

Pam Bowers said: “As well as not being able to source compostable bags at an affordable price, no one seemed to be able to supply on a wicket which is essential for our way of working. The C BAG was the ideal solution.

“Also, what we like about the bags is they immediately look different to their plastic counterparts so the customer is able to tell at a glance they are compostable.”

Watts Farm, Kent-based growers, packers, and distributors of fresh produce, is another satisfied KM customer who had been searching for some time for a cost-efficient compostable packaging solution.

They chose the C BAG due to its lower cost and compostable qualities.





VERIFIED AS COMPLIANT NON-GMO

Both Watts Farm and Strawberry Fields were keen to replace existing packaging with a compostable alternative.

And Strawberry Fields were particularly concerned about GMO in some compostable packaging during their search for a supplier. They were also aware that the UK Soil Association requires organic-certified growers to use compostable packaging with no GMO.

So Strawberry Fields were delighted to discover that the C BAG from KM Packaging had been verified as compliant with the Soil Association Food & Drink standards. It is now being used to pack Strawberry Fields' Rainbow Chard, Red Oakleaf, Green Oakleaf, Romaine, Red Batavia, and Green Batavia lettuce.

THE KEY FEATURES OF THE C BAG INCLUDE:

- Home compostable.
- Guarantee non-GMO raw materials.
- Meets the Soil Association Standard for packaging materials.
- Excellent mechanical properties.
- Very good impact and puncture resistance.
- Excellent water resistance.
- Suitable for manual and automatic bagging lines.
- Good material perforation, keeping fruit and vegetable fresh.
- Printable.

The bio-plastic C-Range products from KM Packaging have been developed in partnership with Treetop Biopak, specialising in providing innovative compostable packaging solutions.

Treetop owner Amir Gross said: "As growers of fresh produce, Strawberry Fields and Watts Farm are very conscious about the environment.

They, therefore, sought a suitable compostable packaging solution.

The C BAG is ideal for them; from plant to pack and then back to compost."

Customers can compost the bag at home, including any vegetable leftovers, which will accelerate the bio-degradation process. Alternatively, if the local council offers kerbside col-



lection of organic food waste, the bags can be used as caddy liners.

The C-Range of bio-plastic packaging materials includes shrink wrap, stretch wrap, adhesive tape, and bags. It enhances KM's portfolio of sustainable flexible packaging solutions and offers customers a wider range of choice.



GEA HIGH PRESSURE HOMOGENIZATION TECHNOLOGY IN FOOD & BEVERAGE APPLICATIONS

GEA is the technological leader for dynamic high pressure homogenizers and plungers pump, suitable for all industries and applications. This is the result of specific know-how and a spirit of innovation that is constantly focused on innovation and high standard process performances.

How homogenization enriches food products?

The benefit of high pressure homogenization is well known in dairy, food & beverage industries for subdividing particles or droplets present in fluids, and reduce them to the smallest possible size, down to nanometer range. Enhanced stability, shelf life, viscosity, color and taste are the essential characteristics that the emulsion gains through this process. Homogenization contribute in increasing digestibleness and, as consequence, facilitating assimilation of the nutritional principles as well. The use of high dynamic pressure and homogenizing valves specifically designed by GEA experts for different applications, allow to subdivided particles at the required size and efficiently mix ingredients at the lowest possible pressure, ensuring energy and cost savings.

What makes GEA your ideal partner?

The most important key of success consists in the close collaboration with customers. The connection of common efforts enable to implement innovative and tailor-made solutions, to maintain continuous product development and to guarantee efficient operations with excellent results on the final products. The latest set-up and continuous improvements on production technologies allow the company to offer a complete range of homogenizers, from laboratory up to the industrial scale. Thanks to a strategy of development of both established and potential applications, often based on cooperation with our customers' Research and





Development Centers, GEA can offer highly specific and customized process solutions to always meet, ensure and repeat over time product quality excellence. All GEA homogenizers are designed CIP and SIP, they are available with cGMP documentation and approved FDA and 3-A certification; GEA is also able to support clients for the IQ/OQ qualifications and product test (FAT-SAT).

ARIETE SERIES. The state-of-the-art technology for power, reliability and flexibility.

These machines are easily implementable in remote controlled systems and complete process lines. GEA homogenizers are available in different configurations, conceived with specific liquid end design that allows to reach up to 1500 bar with premium homogenization performances warranty.

MAIN ADVANTAGES:

- Easy to use
- Highest reliability on continuous production (24/7)
- Reduced operational costs (water, lubrication oil, energy)
- Low environmental impact
- High capacity at ultra-high pressure

ONE SERIES. The combination of convenience and quality to deliver unmatched benefits.

These 3-piston homogenizers are simple and versatile machines manufactured to ensure easy maintenance and simple installation. Available in five versions, the series can meet any production need (from 300 l/h up to 10.000 l/h - 250 bar).

MAIN ADVANTAGES:

- Ready-to-use
- Ideal for small-medium dairy & beverage industries
- High versatility and smart installation
- Long lasting core components
- Reduced maintenance cost
- Safe sanitary design

Find the perfect homogenizer for your product

The Laboratory and the Innovation Center, just refurbished in November 2019, represent a unique



resource for customers to directly test homogenization technology on their product samples, refine receipts, develop high efficiency homogenizing valves and evaluate the performance of installed machines.

Highly qualified staff can support customers in the development of new products, to test maximum process efficiency conditions and product scalability to industrial production processes. 🏭

The quality and the reliability of GEA homogenizers are well known all around the world, find out all the information on the website **www.gea.com/homogenizers**



जीईए होमोजेनाइजर्स उत्पादन साइट – पार्मा

साल 1947 में सोवि परिवार द्वारा इंजीनियरिंग के उद्देश्य से स्थापित और डेयरी उद्योग के लिए उच्च दबाव वाले होमोजेनाइजर्स का उत्पादन करने के लिए, इस कंपनी ने जल्द ही अपने मुख्य व्यवसाय का विस्तार करना शुरू कर दिया और बढ़ती ग्राहक मांगों को पूरा करने के लिए विदेशों में निर्यात किया। जीईए समूह द्वारा अधिग्रहण के बाद, इंजीनियरिंग और विनिर्माण क्षेत्र में वैश्विक प्रौद्योगिकी के नेता, साल 1994 में जीईए नीरो सोवि की वैश्विक दृश्यता और ताकत उच्चतम झलक पर पहुंच गई, जो कि होमोजेनाइजेशन तकनीक में दुनिया भर में अग्रणी बन गई। 150 से अधिक कर्मचारी, 20,000 मीटर वर्ग का उत्पादन क्षेत्र और दुनिया भर में 10,000 ऑपरेटिंग मशीन, भविष्य, नवाचार और ग्राहकों की संतुष्टि पर ध्यान केंद्रित करने के साथ साथ एक लंबे समय तक चलने वाली उत्कृष्टता विशेषज्ञता को हमेशा प्रदर्शित करते हैं।

जीईए के उच्च दाब वाले होमोजेनाइजर्स का उत्पादन स्थल इटली के पार्मा में स्थित है।

यह क्षेत्र इटली की फूड वैली के रूप में भी जाना जाता है, कई बाजार-अग्रणी खाद्य प्रसंस्करण कंपनियों के कारण, जिन्होंने यहां अपना व्यवसाय शुरू किया और विकसित किया।

इस अनूठे वातावरण ने जीईए को इस प्रवृत्ति का पालन करने में मदद की है: उत्कृष्ट निर्माण क्षमताएं एक ऐसी मुख्य विशेषता है, जो हमारे होमोजेनाइजर्स को उच्च गुणवत्ता वाले परिणाम सुनिश्चित करने में सक्षम बनाती हैं, साथ ही साथ विश्वविद्यालयों और अनुसंधान केंद्रों का सहयोग भी कंपनी के साथ है।



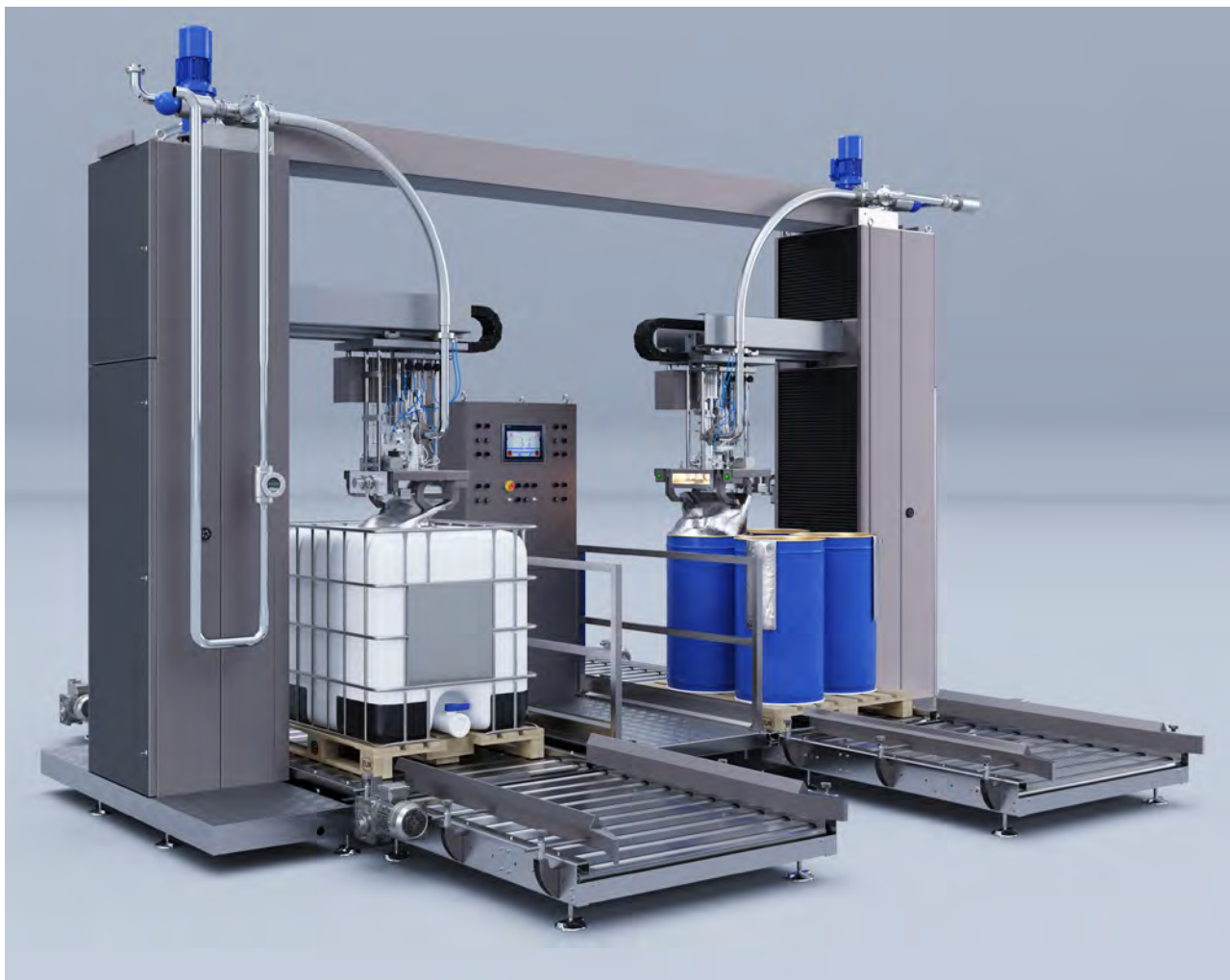
Boost up the taste of nature

Discover GEA homogenizers.
The highly customized process solutions that
ensure excellence in food products

- Improved organoleptic properties
- Longer shelf-life
- Reduced use of additives or stabilizers
- Reduced oxidation and alteration processes
- Improved viscosity, mouth feeling and taste
- Aseptic execution available



TROPICAL FOOD MACHINERY: A LEADING COMPANY IN THE SECTOR OF FRUIT PROCESSING MACHINES



With decades of experience behind it, Tropical Food Machinery is a leading company in the sector of fruit processing machines.

Founded at the end of the 1970s by a trailblazing Italian entrepreneur, the company currently boasts an operative branch in the Brazilian state of Minas Gerais, processing facilities for two fruits located in the north of the country, as well as liaison offices throughout the Asia-Pacific region, Western Africa, India, and Costa Rica.

Thanks to the experience it has gained over the years, Tropical Food Machinery designs and manufactures complete industrial processing lines for tropical fruits and those from temperate climates, for the production of natural juices, pulps, concentrates, sauces, and jams using the most cutting-edge technology. Each line is designed in-house and then manufactured and tested before every delivery. This makes it possible for the company, whose philosophy revolves around the concepts of flexibility and versatility, to guarantee final products that conform to the

most stringent international quality standards, as well as to identify the solution that best meets the needs of each individual client. Furthermore, Tropical Food Machinery offers thorough post-sales assistance that is able to provide replacement parts and prompt technical support if required.

Some of these lines are particularly suitable to the production of orange juice, a product which, also thanks to the pandemic and the growing global demand for vitamin C (the health benefits of which, especially for children, were recently reaffirmed by the

TETI/2

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STERILIZE YOUR PRODUCT...
INCREASE THE SHELF LIFE

bag in drums or bins
ranging from 5 to 1.000 l.

Ideal for the filling treatment of
whole pulp, concentrated juice



TROPICALFOOD
MACHINERY

Tropical Food Machinery Srl

Via Stradivari, 17 - 43011 Busseto
Parma - Italy

www.tropicalfood.net




World Health Organisation) has registered a major increase in demand in the world's largest consumer markets, like those of Europe, the United States, and Latin America, with the latter two, together, absorbing almost half of the global supply.

Today Brazil is the biggest producer of oranges in the world. According to FAO data, 19 million tons of oranges are produced in this South American country alone, 70% of which are used by the processing industry to produce a wide range of products, including 1.5 million tons of orange juice, making it by far the biggest exporter of this product at the global level.

Traditional processing of orange juice includes transformation of the frozen product. In recent years, however, a growing number of the sector's operators have adopted an alternative method that favours aseptic filling technology, which guarantees a shelf-stable product at room temperature (without the need for a cold supply chain) and is a low-cost solution that has already been tested with other kinds of juices.

Tropical Food Machinery provides complete filling units in accordance with clients' marketing and logistical needs: aseptic filling units for 200 l sacks in barrels and 1000 l bins, aseptic filling units for small sacks (with a 3 l to 20 l capacity), filling units for stand-up and flat bags, filling units for bottles, and, finally, filling units for cans.

Its crown jewel is undoubtedly the EA 2C BD aseptic filling machine. With a filling capacity of up to 12,000 l/h, it is perfect for the filling of whole pulp, concentrated juice, and tomato puree in bags, barrels, or 5 l to 1000 l ageing bins. These highly specialised systems make it possible to track the product's entire processing cycle, guaranteeing adherence to the highest FDA safety parameters. 

www.tropicalfood.net



TROPICALFOOD
M A C H I N E R Y



कमरे के तापमान पर उत्पादों को स्टोर करने के लिए एसेप्टिक उपचार सही समाधान है, जो कि पैकेजिंग प्रक्रिया के दौरान और बाद में संदूषण को रोकता है, यह सुनिश्चित करते हुए कि फ्रीजिंग प्रक्रिया से पीड़ित हुए बिना उत्पाद का एक लंबा भंडारण जीवन रहे।

उष्णकटिबंधीय खाद्य तंत्र विभिन्न क्षमता के सड़न रोकनेवाला भराव के कई मॉडल तैयार करता है, सभी एक ही बुनियादी विशेषताओं के साथ:

- भरने के संचालन की अवधि के लिए महत्वपूर्ण तापमान स्तर नियंत्रण,
- पाइप जोड़ और भाप अवरोधों द्वारा संरक्षित वाल्वों को भरना,
- भरने के दौरान विसंगतियों के मामले में अलार्म सिस्टम ।

इस उन्नत तकनीक के लिए धन्यवाद, यह मशीन विभिन्न प्रकार के उत्पाद को संभाल सकती है और विभिन्न आकार की पैकेजिंग भर सकती है।



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1948



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BERRYPLANT: FOCUS ON BREEDING AND QUALITY

Berryplant's effort in the selection of new varieties of raspberry has been growing for the last years, as it has become clearer and clearer that breeding was the future of berry market.

Its 25 years' experience in berry propagation has obviously been an excellent starting point to begin, back in 2006, selecting plants to fulfil the needs of fresh consumption market. "Growers are looking for fruits with a bright red color and a long shelf life and, at the same time, for plants with low managing requirements, able to guarantee also lower labor costs", explains Diego Ioriatti, the breeding manager and co-owner of Berryplant.

Keeping this clearly in mind, Berryplant developed in the past years two patented varieties, Amira and Regina, which are yet among the most profitable cultivars especially for certain markets. "But we wanted to do something more", continues Diego. "And here comes Primalba! It is a primocane raspberry that we selected primarily for its early ripening characteristics." It is, in fact, at the moment, the earliest ripening on the market, about 6/8 days before Polka, which is still considered a benchmark. Since the first tests in their greenhouse in Baselga di Pinè (an area of Trentino, Italy, historically devoted to berries production), its ripening timing has been considered very stimulating, in particular for cultivation in Northern climates. After the first year of actual production, its good results seem to be greatly confirmed. "Growers could start harvesting just 85 days after planting!", says Diego, proudly, "And this is so promising because it could theoretically fill up the production





The R&I program of this Italian Rubus propagator, presents its latest result: the new primocane raspberry Primalba!



gap between floricanes and primocane productions, when fruit prices are higher as product availability is really low.”

What came out from this first harvest of Primalba, is that this plant has many other qualities which growers could widely appreciate: it requires few managements, because the plant is very compact and has short laterals, water requirement is low -making it less sensitive to water stress - and no sensitivity to main fungi and mites is known. Talking about the fruits of Primalba: they’re good looking and flavor is excellent; shelf life is good and they can be harvested even when not completely ripe - leading to very fast picking and high quantities-.

“The upcoming season we’re planning to test the new variety also in hot climates to understand if Primalba could be a good deal also for growers in Spain, Portugal or Morocco, who represents an important market; nevertheless, new materials are raising from the breeding program and few new selections, maybe even more suitable for these areas, are in the process of advanced trials to some of our clients as a collaboration”.

“Concentrating on breeding does not mean forgetting about the basis of our business, which is propagating and selling quality plants.”, interrupts Maddalena Grisenti, the owner and founder of Berryplant, “We accustomed our clients to a very high-quality standard. And we do not want to disappoint them.” In practice, it means that Berryplant is carrying on a 3 years’ control on the plants it’s propagating, starting from a certified pre-basic material, free from pest and diseases, and continuing with a 2 years pomological and phytosanitary control on the mother plants. “We’re known as Rubus specialists (and we proudly declare it in our logo!), so what customers expect from us, is to receive the best Rubus plants, in terms of innovation and quality.”

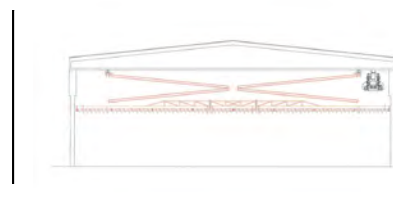
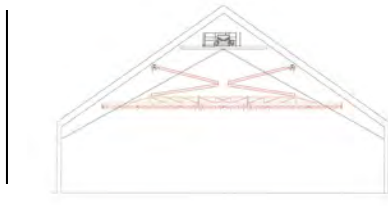
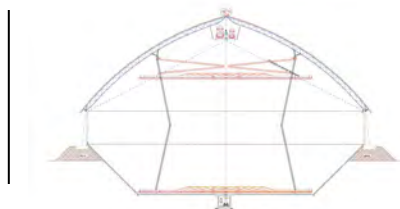
Going back to breeding, research is not limited to raspberry as Diego and Maddalena do strongly believe that blackberry has a great potential, too: “Its success on the market at the moment is limited because there are no good blackberries in the supermarket. This is the reason we’re working hard to select a blackberry cultivar that gives fruits with excellent traits to be profitable for the growers, such as great quality and shelf life brought by hard plants with broad resistance basis. And we’re confident to gather the first results within 3 years now.” 🏛️

www.berryplant.com





BORGHİ SRL: CEREAL STOCKING AND TRANSFORMATION PLANTS



BORGHİ
INDUSTRIAL EQUIPMENTS



One of man's dreams is immortality, a concept bound indissolubly being healthy, which implies eating healthy.

In view of the fact that a large quantity of products, composing our daily diet, derives from cereals transformation (wheat, corn, barley, etc.), it follows that modern politics considers them as strategic products, as well as fundamental resources for a country's economy, so their conservation is a social target, as well as agri-food. Storing a cereal for longer or shorter periods, in a rational and safe manner with the minimum cost of operation, is the task of a silo.

In order to choose the type of a silo to be adopted, many factors are involved, such as annual passing number, storage capacity, conveying capacity, conditioning and non-conditioning systems, possible treatments and other factors.

In any case, the work cycles in a silos must be rapid, having the possibility to collect and to return the product at the same time, where the man must only check.

The silo capacity is a too subjective factor to allow practical suggestions, it depends on the purpose of the plant and the local market conditions as well as on economic-financial calculations.

However, we could state, in the first

analysis, that a silos plant with:

- a. many cells, of modest capacity and with different grains, is used to make quality.
- b. few cells with large individual capacities and few varieties of cereal, serves for convenience exploiting the market prices for supplying goods speculating on the cost (e.g. cereal purchase and storage during the harvesting period)

The silos are divided into two above mentioned large categories:

Vertical silos

Normally circular, polygonal, with hopper and/or flat bottom.

They can be made of metal, where they can reach a diameter up to 30-35 m, with capacity up to 15.000 tons/each one or in concrete, generally with a diameter from 6 to 8 m with inter-bins and heights of 60-70 m (e.g. port silos).

However, we will deal with this type of silos in a special section.

Horizontal silos

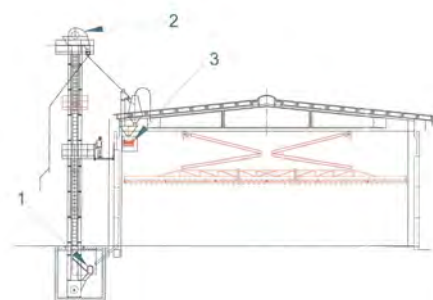
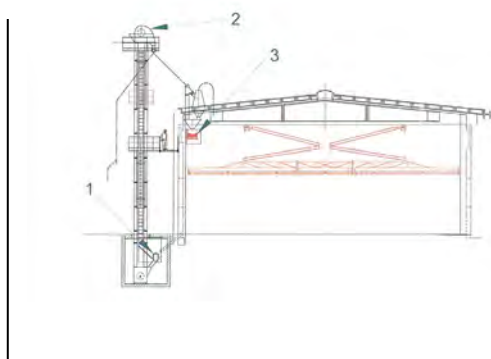
Consisting of flat warehouses, today they represent the most economical system (ratio between cost and stored tons) for cereal storage and conservation (energy and labor necessary for the plant optimal functioning). Generally made of metal

or reinforced concrete and/or prefabricated with variable dimensions: width 20-30m up to 50m and length over 100-150 m with storage height (side wall) ranging from 6 to 11 m, where the unit capacity is generally over 10.000 tons (finding in this situation an economic reason for the choice).

This type of silo is widespread in Brazil and Australia where, in the latter, it covers more than 10% of national storage with warehouses reaching up to 60.000 tons (133 m length, 54 m width, with 11 m average height storage).

The types of horizontal warehouses that we can meet are many, where the best known are the following: As already above-mentioned, the horizontal silos (warehouses) can be made with reinforced concrete walls directly cast in place or with lateral pillars supporting the lateral curtain wall made of reinforced concrete slabs (prefabricated). The flat warehouses can also be made with metal side walls where normally their walls are realized bending (Ω -shaped) steel slabs directly bolted to pillars, always in steel, placed at a constant pitch (from 3 to 5 m) on the warehouse perimeter.

The covering can be realized by means of prestressed concrete



trusses or in metal where for important lights (over 30m) it is an obligatory choice. The theory used to calculate the pushing on the walls (a fundamental element for calculation and design) is the one best known as "land pushing".

In the past the use of flat warehouses for the cereal storages aroused some perplexity due to the difficulties that could be encountered in the management of the stored grain, such as:

- 1) difficulty in ensiling uniformly and constantly
- 2) difficulty in intervening in case of non-conditioning
- 3) difficulty of cereal return in compliance with health and hygiene rules
- 4) difficulty of cereal conditioning
- 5) difficulty in stocked mass temperature and humidity monitoring.

The new technologies and financial market trend (banks finance more willingly a flat warehouse than a vertical metal silos) represent an excellent alternative to storage in vertical silos. Take into account the company's type of activity choosing the unit capacity or the type of silo to be adopted, horizontal or vertical.

DESCRIPTION OF A FLAT WAREHOUSE MECHANIZATION TYPE

A chain conveyor (1) is mounted in one side of the warehouse (normally the longest) for cereal loading and unloading destined to the warehouse storage, in fact:

the conveyor is mounted on the bottom of a reception pit regularly covered by a self-supporting truckway grating along the entire length of the conveyor or only where it is strictly necessary (e.g. near the point of unloading of the vehicles and/or in other points, where it is deemed necessary, depending on the activity to be carried out).

The uncovered part is normally closed with reinforced concrete slabs or steel of suitable shape and thickness. The vehicle will discharge the cereal inside this pit which, through the chain conveyor (1), will convey the cereal into the elevator (2).

The elevator will raise the cereal and load the warehouse loading belt (3). The belt conveyor (3) will be equipped with a tripper (4) with a motorized advancement, able to discharge the cereal inside the warehouse on time.

The warehouse loading and unloading robot is positioned at the tripper discharging. This robot is substantially able to run along the whole length of the warehouse and it can rising and lowering for the whole height of the flat warehouse.

A screw conveyor system is installed on the lower part of the robot to move the cereal from side to side of the warehouse.

As it is easily understandable, once the cereal is discharged from the tripper and it touches the robot wormthreads, the same is pushed on the opposite side.


When the cereal reaches the opposite side, a special rocker system will indicate that the cereal has reached the desired position, so it will drive the tripper to move in a predetermined measure; consequently the loading robot will move and repeat the same cycle up to the total filling of the warehouse.

Some shutters (5) incorporated into the wall, which obviously can be manual or motorized, are installed on the side where the reception pit is located, so the chain conveyor (3). The robot will be placed at the point where you want to unload the warehouse and the correspondent discharging shutter will open.

It follows that before the cereal will fall down by gravity, after by means of robot and then it will be pushed towards the discharging shutter.

In this way the cereal will reach the discharging conveyor which, in turn, will convey the product to the elevator (2) placed generally at the head of the warehouse, under which a valve is able to carry out the following operations:

- return
- recirculation
- another operation (e.g. cleaning)

As shown in the operation description, the loading and unloading robot is the main performing element of mechanization. 

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Ideas, solutions and plants for the food and beverage industry



Aseptic Tanks



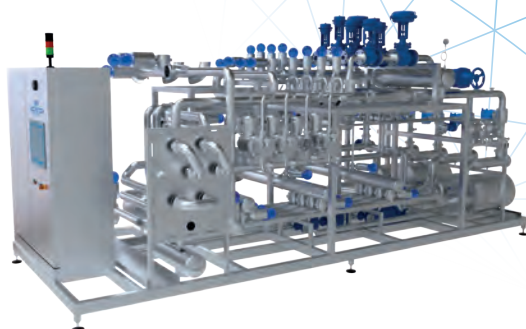
UHT Sterilization Plants



Mixing and
Carbonating Units



Pasteurization Plants

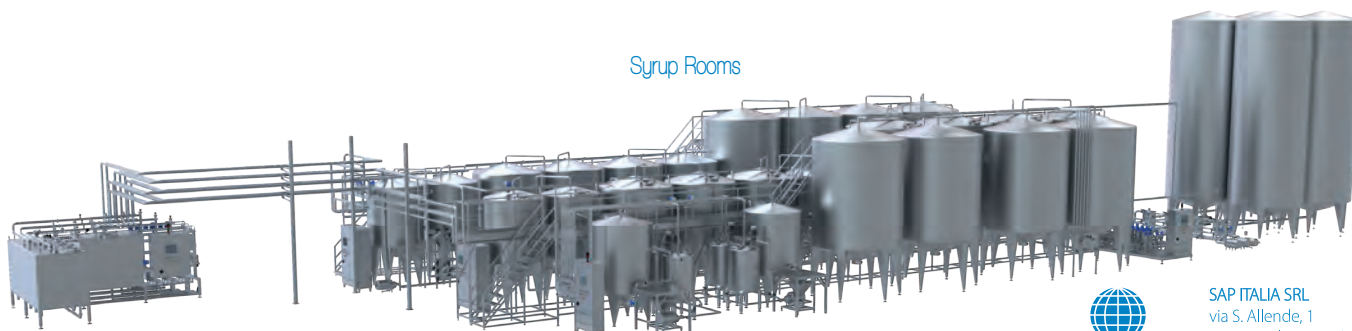


Cip Cleaning Plants

Continuous Sugar
Dissolvers



Syrup Rooms





PROFESSIONAL BAKING SOLUTIONS

for Bakeries, Confectioneries, Biscuits Manufacturers, Bakery-Cafés, Hotels, Pizzerias and Fast-Food Restaurants



Established in 1990, EUROPA has been selling professional ovens to a large number of bakeries, pastry and pizza shops, hotels and supermarket chains. The brand EUROPA has become synonymous with reliability and innovation, specializing in the production of commercial ovens and equipment for bread, pastry and pizza baking.

Located in the North-East of Italy, the company has always had a strong international vocation; in fact, EUROPA worked hard during the years to be present in new markets, being active now in more than 80 countries in the world, thanks to the continuous creation of simple, USER-FRIENDLY products but, at the same time, with the BEST TECHNOLOGY and 100% MADE IN ITALY. The company grew and expanded in a very short time, leading the business over the main international markets. This could happen thanks to a dynamic team, characterized by a professional and fresh approach. The management

group has always been supported by a qualified and experienced technical staff, ready to understand market's requirements and to meet customers' needs. Experimentation and research, in fact, have always represented the primary purpose of this company.

Our mission is and always will be clients' satisfaction. That's why our high-quality products are complemented by an added value: people ready to help and guide the customers through every step of the process.

From the identification of the best product for your production to its offer, from equipment's delivery up to the after-sales assistance, we grant quick solutions and back-up services, offering alternative strategies custom-made for your specific conditions.

The wide range of products offered by EUROPA is divided in 2 main product lines: the BLACK Line and the GREEN Line. The BLACK LINE offers a large

number of OVENS and PROVERS suitable for artisan bakers, industrial bakery/pastry/biscuits productions and supermarket chains. In this line, you can find: rack ovens, electric deck ovens, steam tube deck ovens, multi-loading deck ovens and provers.

Among all our products composing the BLACK Line, a special mention is needed for GALILEO rack ovens. Through the years, this oven has become even more complete, sophisticated and modern. Since 1997, thousands of bakeries worldwide choose to bake their typical BREAD and PASTRY products in our rotary rack oven.

Its strong points are COMPACT dimensions and SOLID structure, joining together REFINED DESIGN and FUNCTIONALITY.

This product has been created fully understanding bakers' work routine: in fact, GALILEO has been studied to



simplify the cleaning and the ordinary maintenance.

Besides, the improved combustion chamber, completely renewed with innovative technologies, has allowed to reach a very high efficiency, with surprising recovery times and very low average consumptions.

The GREEN LINE presents more COMPACT OVENS for smaller bakeries, pastry shops, biscuit manufacturers, bakery cafés and ho.re.ca. If you need small-footprint solutions and you are looking for a high-performance product in a limited space, GREEN LINE has the proper solutions for you: electric modular deck ovens, compact rotary rack ovens, mini-rotary rack ovens, convection ovens, combined solutions and provers.

Talking about GREEN Line, we have to talk about EDISON, which leads the idea of MULTI-PURPOSE ELECTRIC MODULAR DECK OVEN to a new, advanced level.

EDISON is available in different models, from 2 to 7 trays per deck, stackable up to 5 decks. Furthermore, EDISON ovens are available in 3 different CHAMBER CONFIGURATIONS: PASTRY, BAKERY or PIZZA.

In this way, the range can offer more than 50 solutions for PASTRY SHOPS, BAKERIES, HOTELS, FAST FOOD, RESTAURANT and PIZZERIA, allowing the customers to create the perfect partner for their own workplace.

For EUROPA, the last ones have been 30 years of ovens but, above all, 30 years of innovation: research and

development, analysis supported by state-of-the-art tools, patented systems, and care for detail in every component.

This is how we build our products, by introducing and patenting new solutions, in order to make everyday life easier for bakers, pastry chefs and pizzaioli.

And the best is yet to come! 🏠

www.europa-zone.com
FACEBOOK @europaforni
INSTAGRAM @europaovens



बेकरी, कन्फेक्शनरी, बिस्कुट निर्माता, बेकरी-कैफे, होटल, पिज्जेरिया, फास्ट-फूड रेस्तरां और सुपर-मार्केट चेन के लिए यूरोपा पेशेवर रैक ओवन और डेक ओवन के उत्पादन में विशिष्ट है। इसकी स्थापना 1990 में हुई थी।

इटली के उत्तर-पूर्व में स्थित, इस कंपनी का हमेशा एक मजबूत अंतरराष्ट्रीय व्यवसाय रहा है। यह कंपनी दुनिया भर के 80 से अधिक देशों में ओवन का निर्यात करती है, उपयोगकर्ता के अनुकूल उत्पादों की पेशकश करती है, तथा साथ ही, सर्वश्रेष्ठ तकनीक के साथ सुसज्जित है और निश्चित रूप से एक प्रतिष्ठित "मेड इन इटली शैली" के साथ डिजाइन की गई है।

एक पेशेवर और नए दृष्टिकोण की विशेषता वाली एक गतिशील टीम की बदौलत कंपनी ने मुख्य अंतरराष्ट्रीय बाजारों में अपने व्यवसाय को बढ़ाया और विस्तारित किया। प्रबंधन समूह को हमेशा एक योग्य और अनुभवी तकनीकी कर्मचारियों द्वारा समर्थित किया गया है, जो बाजार की आवश्यकताओं को समझने और ग्राहकों की जरूरतों को पूरा करने के लिए तैयार हैं। प्रयोग और अनुसंधान, वास्तव में, हमेशा इस कंपनी के प्राथमिक उद्देश्य का प्रतिनिधित्व करते हैं।

ग्राहकों की संतुष्टि हमारा मिशन है और हमेशा रहेगा।



NICOFRUIT PAST, PRESENT AND FUTURE

NICOFRUIT
ITALIAN FRUIT & VEGETABLE PRODUCERS

Full of Vitality

NICOFRUIT is a registered trademark, owned and distributed by Frutthera Growers, an Italian company located in a town called Metapontino, in the Basilicata region, in the south of the Country. This area is well known and is ideally suited to the growing of strawberries, grapes, kiwi and citrus. These fruits find their natural habitat here and are included in the most representative made-in-Italy productions.

Adopting the integrated production quality system means employing environmentally friendly production methods, protecting the health of both workers and consumers, making use of technical and economic features of the most modern production systems.

Special care to the environmental issues led the company to achieve an important result: the drastic reduction of pesticides, implementing specific natural technics and recurring to a massive use of antagonistic insects. Natural protection of the plants gave a large contribution to get a "zero residues" pesticides for a lot of the fruit we produce.

Packaging represents another way to respect Earth. A totally brand new compostable packaging has been implemented in our production lines, being entirely degradable and used as a natural fertilizer. Great help for the environment!

Frutthera adopts the integrated production quality system that consists of a combination of eco-friendly production methods, the protection of both workers and consumers' health, and technical and economic requirements of the most modern production systems.



Full of Vitality



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t. +39 0835 954666
f. +39 0835 953255
info@frutthera.it

nicofruit.it





they are sufficient to feed most of the company's energy needs.

From the very beginning, dynamism and long-term outlook have allowed the company to reach internal large-scale retailers and important market spaces from South America to the Middle East. Analysing percentage shares, the products are sold 50% in the foreign market, 30% in the internal retail and 20% in the general market.

Since commercial aggregation is a very important target to achieve, Frutthera joined one of the biggest Producers Organization in south Italy, with a total turnover > 70 mln €, Asso Fruit Italia, that is also a partner of Italia Ortofrutta, the biggest Italian National Union.

Storage and conditioning are controlled by a software cell that provides constant monitoring of the products' temperature and humidity, from the countryside until their final destination into targeted markets.

Monitoring the correct temperature during transport is guaranteed by small electronic recorders installed on the means of transport. NICOFRUIT products are traceable and trackable.


Thanks to a computerized system, the product will be followed through all the stages of processing, packaging and storage to the sale moment so that the consumer can trace back the soil where the fruits and vegetables have grown.

Today FRUTTHERA Growers can count on more than 40 partners that cultivate more than 500 hectares of land.

On average, 160 seasonal workers are employed with a max of 350 in the most intense harvest periods. The factory is 12.300 sqm (indoor

and outdoor). It is newly built and it has been designed to guarantee the quality of the products.

Sustainable development is the only possible model for NICOFRUIT - solar panels are located on the storage and on the processing plants, and

As a natural consequence of environmental awareness, Frutthera takes part in a lot of projects to achieve this target, organized by Universities, Research Institutions and many other reliable partners. 

www.nicofruit.it





NUTRITIONAL CONCEPTS LAB

INNOVATIVE OPEN R&D FACILITY FOR THE FRUIT AND VEGETABLE SECTOR AND THE FOOD INDUSTRY AT VILLA FLORA VENLO

Mi Food has developed a new R&D facility for the food sector and agro-industry at Villa Flora in Venlo. The Nutritional Concepts Lab uses a patented process in the vacuum coater as the basic technique for processing vegetables and fruit quickly and at core temperatures up to 35°C. Subsequent processes such as puréeing, mixing, drying and spraying are also carried out at the Nutritional Concepts Lab. The facility is suitable for the development of innovative dry and liquid products.

Retention of bioactive substances and vitamins thanks to low temperatures

MiFood developed its Nutritional Concepts Lab specifically for preparing innovative vegetable and fruit-based products. Fruit, vegetables

and waste flows from industries that work with these products can be processed here for a short period and at low core temperatures (up to 35°C). The patented process in the vacuum coater is key to this. Products boil at a lower temperature in a vacuum. The bioactive ingredients, flavour and vitamins remain fully intact due to the short processing time and the low core temperatures. This makes the new R&D facility particularly suitable for the development of healthy pearls, soups, sauces and mixed drinks. Fresh fruit and vegetable mixes can also be processed or dried quickly in the vacuum coater. Products can be mixed or puréed in another process unit at the R&D facility.

Suitable for the development of new liquid and dry products

The vacuum coater incorporates a twin-shaft mixing mechanism that

mixes, fluidizes and aerates the products quickly and efficiently. During this mixing process, liquids such as juices, concentrates and oils can be added to liquid and dry products. The finely atomized liquid droplets mix homogeneously with the products as they are sprayed. Dry products such as powders, pearls, cereals, croutons and extruded pellets can be coated during this spraying phase, without clumping or sticking. The vacuum function used by the Nutritional Concepts Lab ensures that liquids applied in this way can then be sucked deep into dry products. It is even possible to add multiple layers around each product particle, and to vary the vacuum during the process.

Brightlabs and expert network of food and technology specialists

Companies active in fruit and vegetables and food producers can book





half-day sessions at the Nutritional Concepts Lab for testing and product development. Small-scale production runs are also possible. In addition, these activities can be supported by the new R&D facility's network of food and technology specialists. Batches from 10 to 500 litres can be processed. Furthermore, customers can use Brightlabs to determine the constituents, quality and food safety in vegetables and fruit. The Nutritional Concepts Lab obviously maintains strict confidentiality when working on projects. For more information about the Nutritional Concepts Lab and product innovation, please contact Raymond Nolet, +31 6 10322186, send an email to info@mifood.nl or browse to



www.mifood.nl 

a perfect cooking...always



BAKERY AND PASTRY EQUIPMENT
FORNI E ATTREZZATURE PER PANIFICI



realforni.com

BOSS, AN UNCOMPROMISING OVEN

Real Forni's new rotary oven Boss combines innovation and researches with the yearly experience and tradition

For more than 50 years Real Forni has been working in the development of ovens and equipment for the baking sector supporting the professionals from all over the world in this important food sector. The new rotary oven Boss combines innovation and researches with the yearly experience and tradition of the company thus making Boss the reference model of its category.

Maximum efficiency, reduced overall dimensions and low consumption are the key features that allow the user to save energy and space, reduce the cost of maintenance and improve the result on the baked product.

A good ventilated baking for a rotary oven consists in the correct distribution of the heat and in the ability to bake the product with a gentle and abundant flow of air: this is the only way to equal the baking of a static oven. Another ultimate point is the ability of the oven to produce a great quantity of steam in a very short time and to regenerate it for the following baking. Thanks to the steamer positioned in the middle of the air flow, the oven Boss guarantees quickness and power to obtain crumbly products with a crisp crust.

In the planning stage we have worked hard on the consumption and the results are real, indeed the oven Boss 60.80 heats up very

quickly and it needs only 50.000 installed kcal/h! This is possible thanks to a system of baking endowed with two powerful fans and an heat exchanger with triple turn of fumes and to a system of insulation consisting in three layers of

rock wool compressed panels. As for the consumption, this system is extremely virtuous and with the addition of reduced overall dimensions it is possible to position the oven side by side on its three sides. These features give you the possibil-





ity to save a huge quantity of space inside your place in comparison to any other oven in commerce.

The range starts from the smallest 50.70 which is able to contain a trolley of 40x60, 40x80, 50x70 or 18"x26" of 16/18 trays, its reduced dimensions allow the transportation of the oven completely assembled. For trays 60x80 we can offer the classic Boss 60.80 with 18/20 trays or the "reduced" Boss with 16/18 trays (Boss 60.80 R) which is perfect for places not so high.

The range includes also the 60.100 model for trolleys 60x90, 60x100 and 80x80 and the largest Boss 80.100. All models are available with gas or gas-oil burner or electric power supply.

The ovens are provided with a low-

er platform for the rotative trolley in order to have an easy entry of the trolley, a motorised flue valve and stainless steel side panels. You can choose, as an optional feature, the fume exhaust from the rear wall of the oven or an advanced LCD display programmer.

There is also the brand new innovative and spectacular "Panorama" version which has a glass on the back side that enable the direct view of the baking process inside the oven, which is realized with a double inside glass with a very high insulation and with an external curved and openable glass for maximum safety, cleaning and beauty.

This oven is perfect to separate the laboratory from the sale zone and

it can be a great attraction both in shopping centers and in small bakeries because it guarantees a privileged view on the baking process, keeping a clear division between laboratory and commercial zone.

A LCD display inserted on the top, exposed to the public, is also available. This LCD display shows the state and the type of product which is baking (Baguette - ready in 11 minutes) with photos in high resolution. 🏠



TP FOOD GROUP: A SUCCESSFUL BUSINESS MODEL WITH A GLOBAL FOOTPRINT



Innovative spirit, attention to customer needs and forty years of experience in the food processing sector. With these premises, TecnoPool S.p.A. embarked in 2015 on a development and growth path which, in 2019, led to the formation of TECNOPOOL TP FOOD GROUP.

The acquisitions. Over the past few years, a series of companies joined TecnoPool Group: Alit (Italy, 2015), the Gostol (Slovenia, 2016), the Tecnofryer (Spain, 2017) as well as Logiudice Forni, Mimac and Mecateck (Italy, 2018). The combined expertise of the Group has enabled a well-rounded Total Processing solution offering. To constantly pursue technological development and provide customers increasingly high-performing equipment, the group has set one main Mission: to become a global leading supplier of machinery and complete lines for industrial, semi-industrial and artisanal food processing. Today, TECNOPOOL TP Food Group is a market leader and key supplier in over 80 countries around the world, for the design, production and installation

of food processing equipment, with a strong orientation towards "Tailor Made" solutions. As a unique, worldwide player, with a leading role in the Bakery Products sector, TECNOPOOL TP Food Group can satisfy every customer request, thanks to a wide range of ovens: from the small artisan to the semi-industrial laboratory, up to the most complete industrial line, covering all manufacturing processes: from dough preparation to packaging.

From the small baker to the large food industry. The idea behind this relentless development is simple and ambitious: to provide customers with the best solutions for their needs, by designing complete and tailor made lines. Customized structures and processes leave customer's imagination as the only limit. That is why, for each buyer, TECNOPOOL TP Food Group studies and implements customized and flexible systems, meeting every specific need. Experience, Research and the Knowledge, gained over decades of activity, allowed the group to develop an analytical and dedicated approach. After eval-

uating any critical aspect together with the customer, the company can offer innovative products and improved solution compared any existing one.

Strong ties with company values are leading the Group to focus on meeting high quality for its products and delivering excellent level of support services before and after sales. The Group companies are proud of the timely and accurate support that can be provided 24 hours a day, 7 days a week, which represents a strong competitive advantage in the market. Periodic check-ups and direct remote support allow customers to prevent critical interruptions and downtime, ensuring continuity in the plant production process.

The Research and Development efforts, focused on introduction of innovative technological solutions, aim at continuously improving manufacturing processes to further optimize customer production rates and costs. Of course, the quality of the product is paramount as well as a considering "energy saving" and environmental aspects. Having the




possibility to test every type of product, with the supervision and assistance of experienced technologists and specialized technicians, represents an important added value. TP Food Group customers can benefit from this opportunity, thanks to a fully equipped Test Room, where key users can take advantage from a wide range of equipment made available to them.

- **Tecnopool:** World leader in the design, manufacturing and installation of equipment for complete production lines, covering food industry heat treatments during all stages of processing: proofing, baking, cooling, freezing and pasteurization, from -40°C to $+300^{\circ}\text{C}$, with infinite fully customizable layout configurations.
- **Gostol:** Provider of integrated industrial solutions for bakeries. Offering both thermal cycle and convection as well as diathermic oil deck ovens, including integrations services for the bakery equipment. Addressing medium and large industries, while covering make-up, molding and leavening processes.
- **Tecnofryer:** manufacturer and supplier of innovative industrial, semi-industrial and semi-artisan fryers, for various food sectors: from bakery to meat, from breaded products to snacks and peanuts, also covering pet food products.

- **Logiudice Forni:** Leading manufacturer producing professional steam tube deck ovens, electric ovens, rotary ovens and professional spiral mixers for bakeries, pastry shops and pizzerias.
- **Mimac:** Leading manufacturer of dropping machines for the confectionary industry: the best solutions to concretely satisfy the production needs of artisan shops, semi-industrial producers and the large retail sector.
- **Mecateck:** builder of tunnel and multi-level lines and ovens for

the industrial and semi-industrial sector.

Tecnopool TP Food Group is positive and determinate about its future, driven by the strength of six leading worldwide recognized companies.

Constant commitment and ambition will be the leitmotif for continuous growth, to remain on the leading edge of a constantly evolving market. 

www.tecnopool.it



हम हीट ट्रीटमेंट और खाद्य उत्पादों के प्रसंस्करण के लिए -40°C से $+300^{\circ}\text{C}$ तक के उत्पाद डिजाइन, निर्माण और स्थापित करते हैं। उत्पाद मेक-अप, प्रूफिंग, पाश्चराइजिंग, बेकिंग, कूलिंग, डीप-फ्रीजिंग के साथ-साथ समग्र हैंडलिंग को कवर करते हैं। हमारे लंबे समय के अनुभव से हमने हमेशा अपने ग्राहकों को समाधान और सेवाओं के साथ प्रदान किया है। एक स्टॉप शॉप के रूप में कार्य करके, हमने सभी ग्राहकों की विशिष्ट आवश्यकताओं को पूरा करा है। अत्याधुनिक तकनीक की गारंटी, बेहतर डिजाइन कौशल और हमारा लचीलेपन हमेशा हमारी ताकत और बाजार में हमारी सफलता के लिए हमेशा महत्वपूर्ण रहा है, जो हमें दुनिया भर में ग्राहक आधार के लिए "मेड इन इटली" समाधान प्रदान करने की अनुमति देती है।

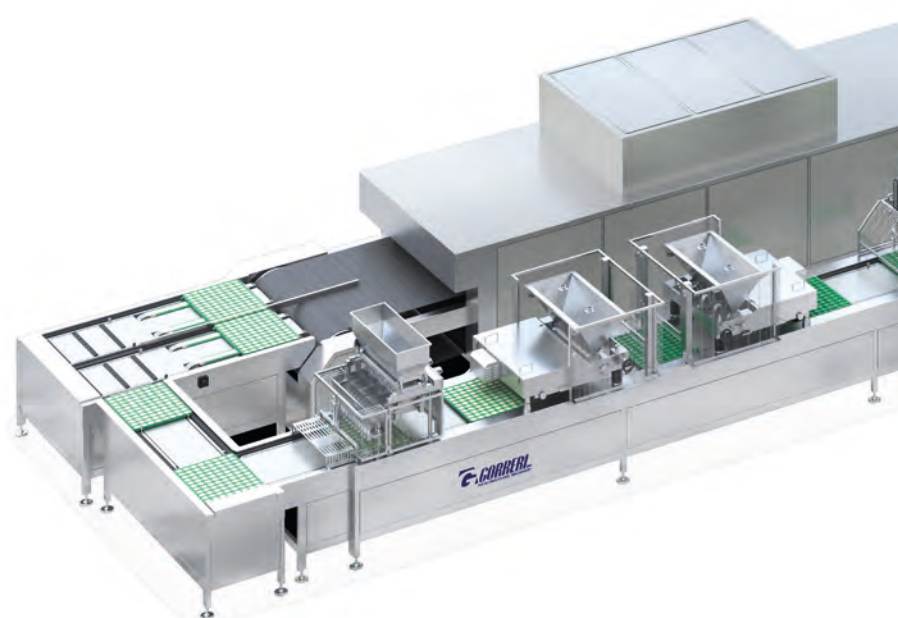
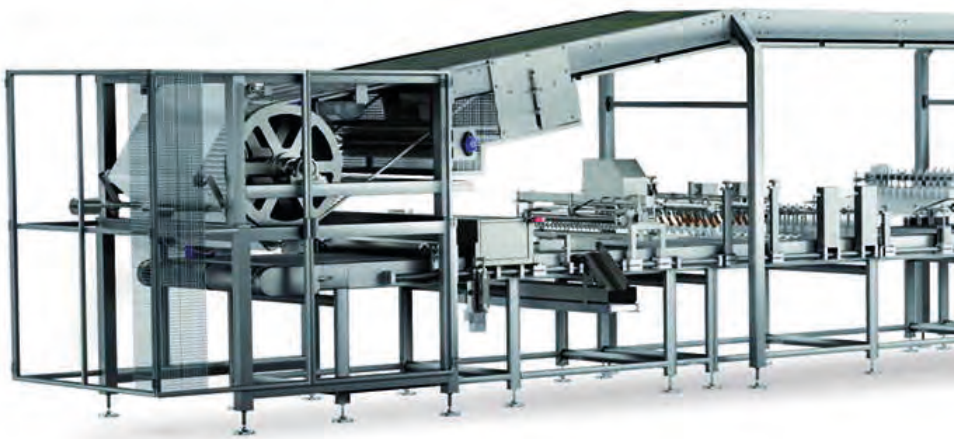
A UNIQUE AND COMPLETE HIGH-TECH WORLD

GORRERI Food Processing Technology® is world-wide known for its ability to manufacture customized and designed turnkey solutions and to produce machineries and technologies unequaled for performance and results.

GORRERI®'S RANGE is very wide and complete. The company offers to its customers innovative and high performing solutions for many different applications like Compact and semi-automatic Lines for the production of Round And Rectangular Layer-Cakes and each kind of Dosed Products, Muffins, Eclairs and Shaped Cakes; both Vertical and Horizontal Injection Devices, Ultrasonic Cutting Systems for any need, Depositors, Enrobing and Decorating Devices, different solutions of Depanning Systems, Robotic arms to decorate and Printing Systems with edible inks as well as Customizable Machineries Made On Request.

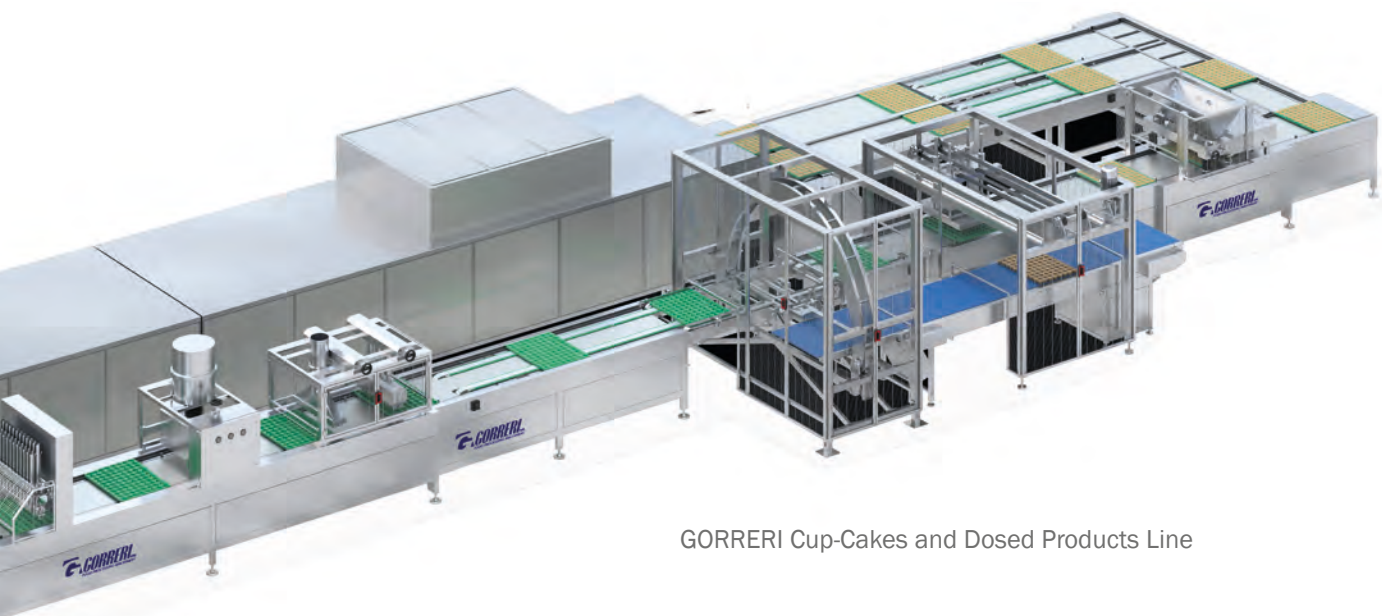
MATCHLESS MIXING SYSTEMS. GORRERI TURBOMIXER®, the famous and unique turboemulsifier with vertical head is an innovative in-continuous mixing system, fruit of many years of experience that through a bright solution like VERTIMIX TECHNOLOGY® is able to emulsify, in few minutes, batters, cream, mousse, sponge-cake with a final density impossible to reach with any other mixing equipment on the market.

Thanks to VERTIMIX Technology® and to the great know-know, GORRERI® is able to



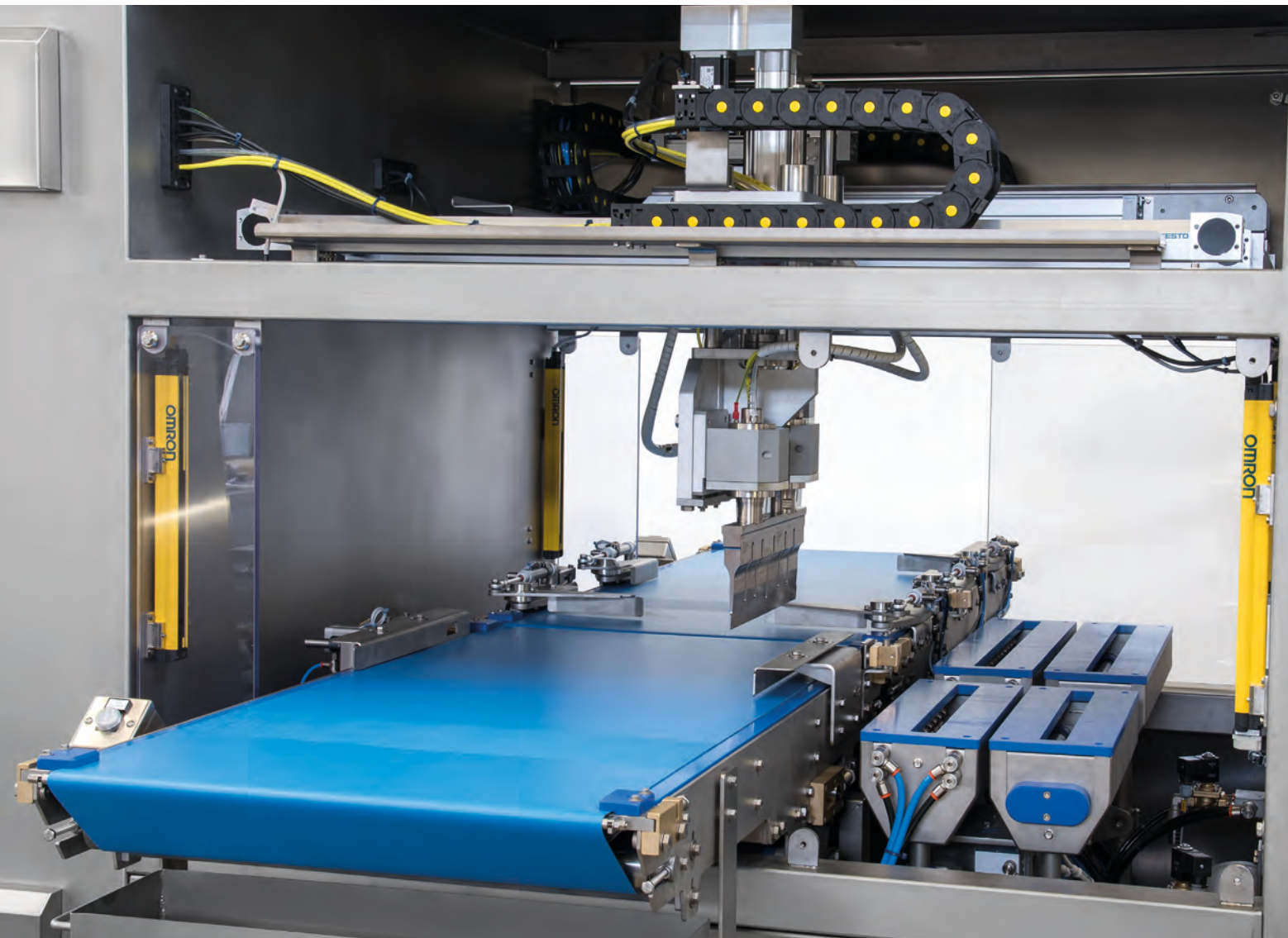


GORRERI Sponge-cake Line



GORRERI Cup-Cakes and Dosed Products Line





provide unique and innovative solutions to replicate complicated and craft processes, impossible to replicate with any other mixing device on the market all in continuous. This means space, time and money saving! Lady Fingers, Chiffon Cakes, Angel Cakes, Special creams, with or without inclusions, Chantilly, special batters without

emulsifiers or preservatives, egg-free batters and egg-free sponge cake, special products... It is incredible the number of products you can obtain with GORRERI TURBOMIXER TECHNOLOGY®. GORRERI® is also widely known for PLANETMIXER SERIES®, a range of indestructible pressurized planetary mixers, available in 6 different capabilities.





ity (from 120 to 800 lt) with a complete range of optional and devices to satisfy each single production need.

A complete mixing solution with steam cooking device, cooling device, transferring pumps, bowl lifters, automatic uploading and downloading of the ingredients and much more.

COMPLETE PRODUCTION LINES. More than 50 years of experience in the confectionary sector process make Gorreri Company able to design turn-key and tailored solution for the production of Sponge Cake based products, Layer-cakes, Pies and Tarts, Muffins , Eclairs and each kind of Dosed Product. It is only when you know perfectly the production process and the technological characteristics of different batters and dough that you can govern every step of a production process, avoiding loss of production and guaranteeing the maximum of optimization.

A PHILOSOPHY THAT MAKES GORRERI'S MACHINERIES UNMISTAKABLE.

Gorreri's lines and machineries are all designed with a specific and unique philosophy that makes each product highly recognizable and optimized for the use for which it has been studied.

Simple and fast maintenance, assembly and dismount without using keys or tools, High-tech touch screen panels interconnectable with the business management, Installation of the best



Gorreri TURBOMIXER GMG Series

components on the market, High flexibility, Entirely sanificable; High performance with reduction to minimum of the waste, Installation of the most recent and innovative technologies, Clean, simple and essential design to avoid contamination and dust.

A complete and innovative world, where INNOVATION and RELIABILITY are the main keywords. An historical Company that is still quickly growing and that in 2019 will inaugurate a new and innovative Company Site in the center of the Food Valley and of the Food Tech Valley, in the north of Italy where in 1987 it all began.

A brand new facility with a new and high-tech laboratory where customers will have the chance to test the most iconic technologies with their own ingredients and where they will have at their complete disposal all the 50 years-old Gorreri's know-how in the Confectionary process. 🏢

Visit:
www.gorreri.com

THE TOP QUALITY INDUSTRIAL MIXERS

Eschcer Mixers specializes in the production of mixing machinery for the bread and pastry-making sectors. Over the years we have gained specialized knowledge that has allowed us to develop machines and solutions to meet the needs of a variety of clients and different types of markets. Our machines are renowned for their sturdiness, durability, accurate finishes, and for the quality of the dough they produce.

BAKERY Equipment

We propose Spiral and Wendel mixing concepts. Both solutions can be with removable bowl through a Patented® bowl locking and motion system MR-MW Line or bottom discharge system MD-MDW Line with conveyors belts or bowl lifters which can be matched with automatic solutions with linear system and storage of the resting bowls in vertical or linear storages, rotating automatic systems-carousel, scraps recovery systems, transverse hopper systems and star-cutting / guillotine / roller with guillotine and other customized solutions.

PASTRY Equipment

The range of Planetary Mixers with double tool for the pastry industry is characterized by the lack of oil lubrication systems, improving hygiene and reducing machine maintenance. A wide range of interchangeable tools is available for different uses and doughs. For industrial productions, we have developed the PM-D Line with independent tool movement, with individual speed regulation and the possibility to reverse the motion. While the PM-DB Line with the bridge structure allows automatic insertion of the ingredients, air insufflation to reduce mixing times and increase volume, dough processing with negative / positive pressure and cleaning through CIP washing system. Various bowl discharge options are available. 🏠

www.eschermixers.com





ESCHER

mixers

20

2000
2020
ANNIVERSARY



LASER: COMPLETE PLANTS FOR FOOD INDUSTRY AND BAKERY PRODUCTS

Laser has been specializing for years in the supply of complete plants for food industry and bakery products such as lines for the automatic production of biscuits, crackers, soft biscuits, cakes, plum cakes and tin bread.

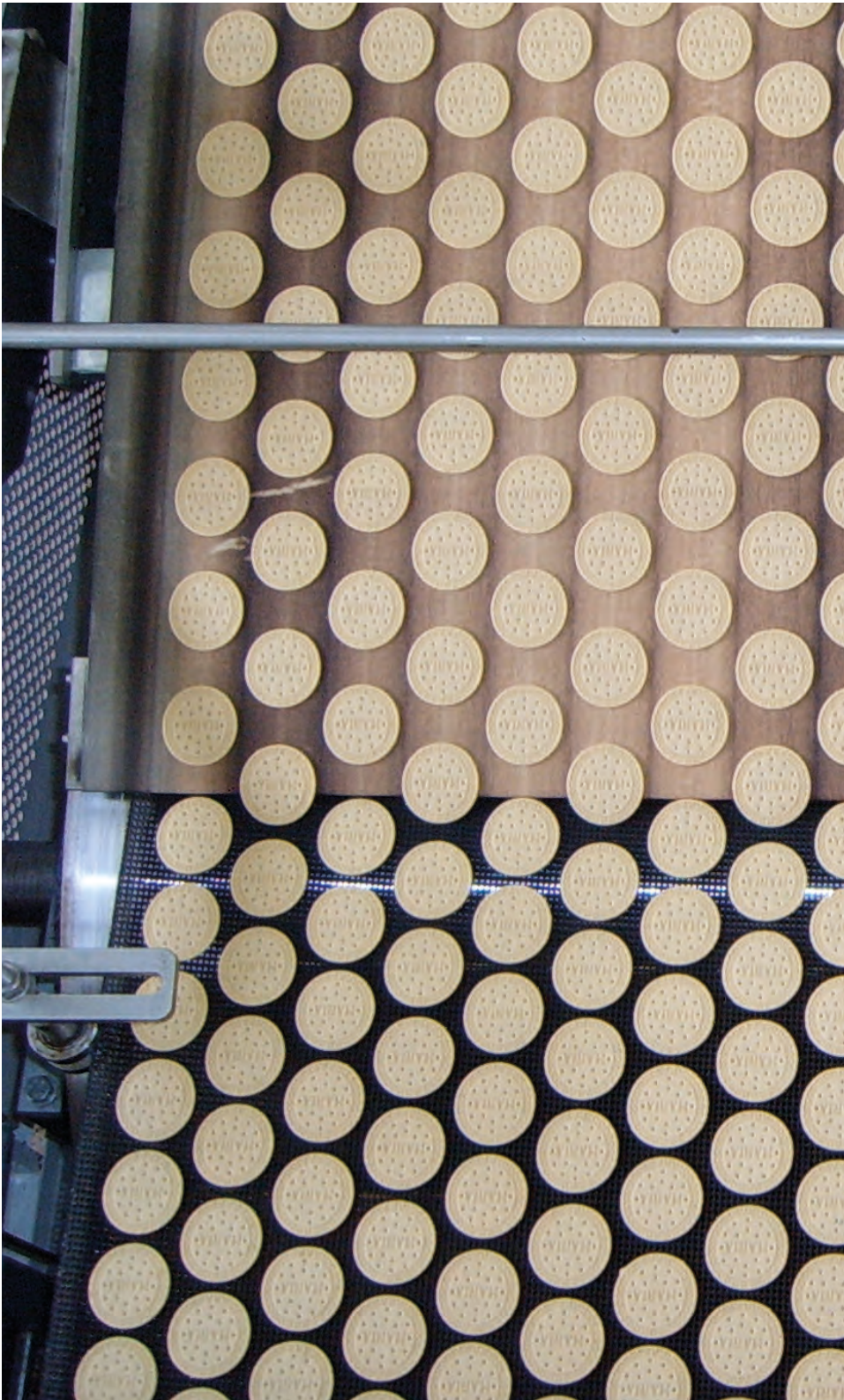
Thanks to its remarkable propensity for export and to the tailor-made, each line is taken care and customized in every single detail according to the requests of the customer and to the characteristics of the final product.

With more than 500 production lines installed in more than 200 countries worldwide with a strong presence in emerging markets even with local production units, the company aims to become a reference point for technological innovations in machinery for bakery products.

The range of products Laser can offer is the most complete in the market and actually can cover the full production of bakery products from mixing section, which can have bridge type planetary mixers, horizontal sigma mixers or turbomixers, to the forming section where several range of extruders, depositors, rotary moulding machines and lamination line for biscuits and crackers can be offered.

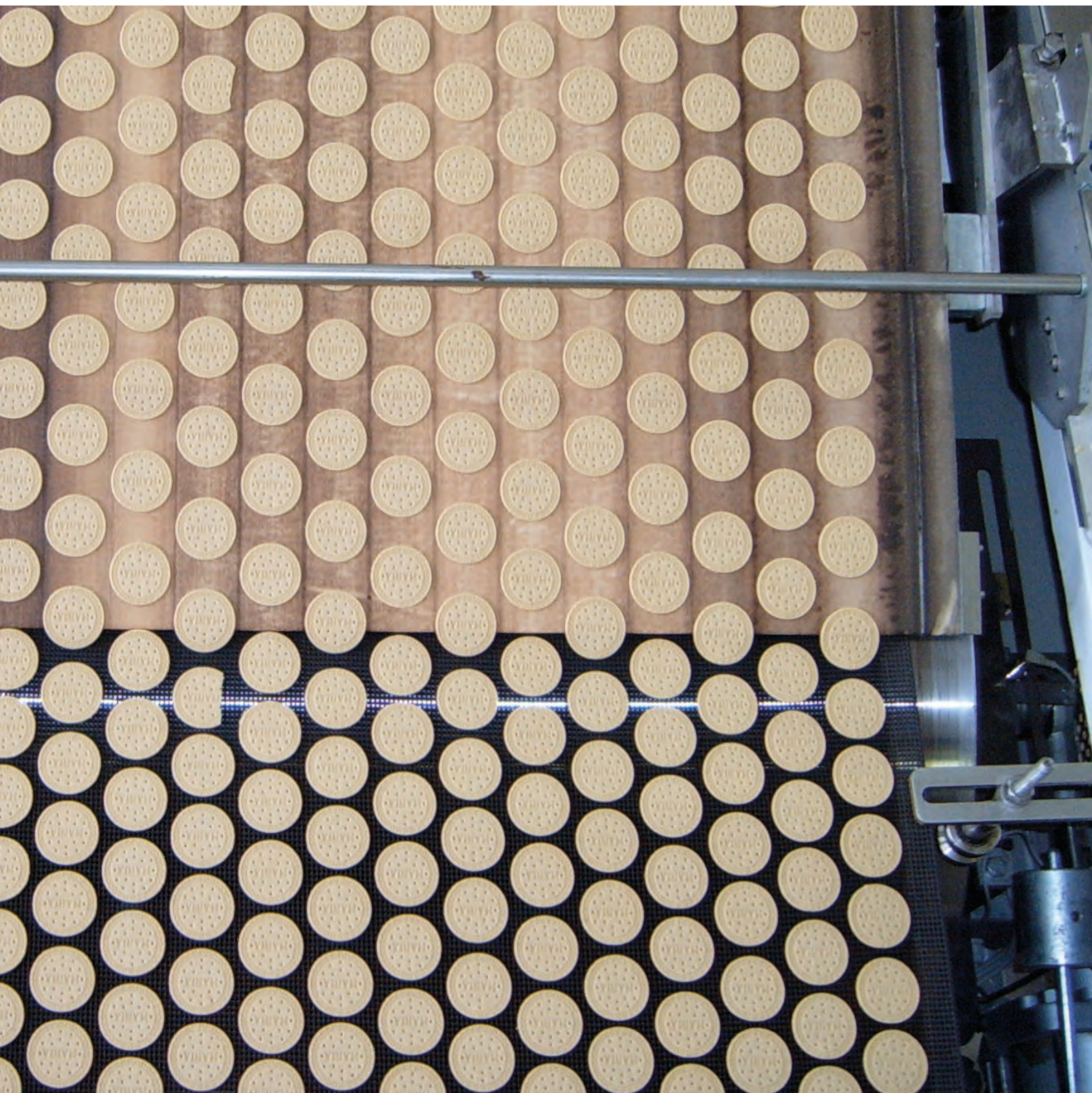
Special version of the machines for wash-down execution, Alergen free production, petfood productions are available upon request.

Tunnel ovens are a core product from Laser and each one is tailor





LASER
BISCUIT LINES
AND OVEN





The ovens can come barebone and assembled locally or in pre-assembled and pre-insulated modules of 2 mts for a quicker installation and minimize the downtime or commissioning. Systems at the end of the line include cooling conveyors, oil spray units, cooling tunnels, in line and off-line sandwich equipment, stacking devices and automatic handling system for elevate outputs are some of the ancillary stations Laser can supply thanks to its long expertise in the field.

Everything is integrated with the most recent software automation and can be guarantee of constant and consistent biscuit production with overall efficiency of the process only a single supplier can guarantee.

Laser is also able to offer you a 360° service for food technologist consultancy thanks to its Italian and foreign experts which usually collaborate in the projects already from the engineering phase, ensuring that all the details of the product are taken in consideration before the line is designed.

made accordingly to the technological requests: whether it would be direct gas fired, cyclothermic or forced convection, or a combination of these variants, the baking will be tuned to the requirement of the product, with simple and intuitive temperature and steam extraction controls.

This team will collaborate with the customer in order to improve, introduce new products, minimize downtime and running costs and train the customer team in order to improve the overall factory output and working conditions. 🏭





ERREPAN SRL, METAL BAKING PANS AND TRAYS FOR INDUSTRIAL CONFECTIONERY AND BAKERY PRODUCTION SINCE 1987

Italian quality, high production flexibility and close relationships with the most important plant manufacturers in the world. ISO certified since 1998

Mission: to help our customers to choose the products that best meet their needs, according to the automation level of their production process, making sure they are satisfied. This is the mission statement of Errepan, a company that has been designing and manufacturing baking trays and pans for over 30 years.

Investments

During its activity, this small artisanal business has become a real large company thanks to constant and targeted investments.

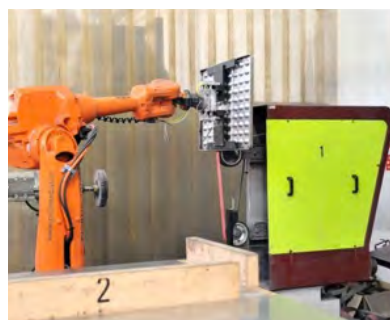
The new arrivals include an automated laser welding station, particularly suitable for specific products, which allows a neat work, slag and burr-free, without sacrificing the performance levels of the classic systems.

Products

Thanks to a flexible production structure, Errepan is able to offer and design customised solutions. The synergic collaboration with the most important manufacturers of machinery and systems is an extra guarantee for their customers.

Errepan offers two main lines:


- standard line: the catalogue is dedicated to bakery retailers;
- industrial line: customised products for the food industry.



Download the catalogue for the standard line

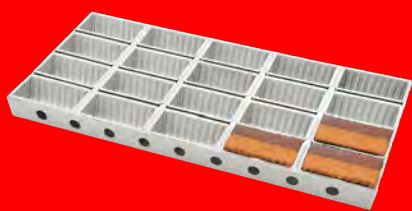


Visit the website

On its brand-new website, the company shows its products providing technical details and a wide range of pictures. 

www.errepan.com





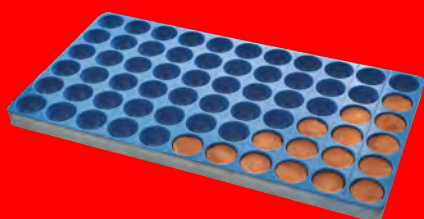
Loaf pan with ridged containers



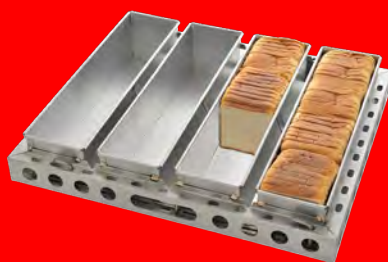
Pan for croissants on a single aluminium tray or sheet



Flat sheet for high output machines



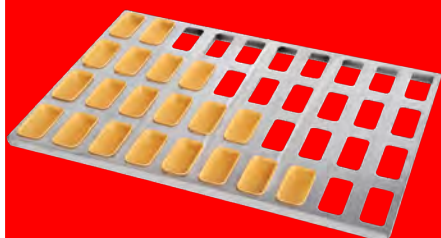
Semi-spheric form with highly non-stick Teflon.



Slotted loaf pan with automatic cover lock



Sheet for hamburgers for up to 125mm in diameter



Tray with self-carrying paper cup holders



Pan for muffins with a large selection of shapes and diameters



Stackable pan for panbauletto





refreshing taste of technology



WATER PURIFICATION
SUGAR AND SWEETENERS DISSOLVING
CONCENTRATES PREPARING
SYRUP STORAGE
PASTEURISING
DOSING AND BLENDING
PRODUCT CARBONATING
WATER OZONISING
FLUIDS HANDLING
CLEANING AND RINSING
HOMOGENIZING
TURNKEY PROJECTS



EQUIPMENT FOR THE BEVERAGE INDUSTRY



WS is a Company, founded in 2005, working as process equipment supplier for the beverage industry. During these years WS has achieved a very good reputation in the beverage industry field, managing to cooperate with the major global players, such as Coca Cola, Pepsi Cola, Nestlé Waters and Orangina-Schweppes, and with private investors installing new production facilities, quite often green fields, in emerging Countries.

WS has met new standards for product quality, energy saving and maximum plant output while complying with the strictest criteria for hygiene and safety. All the devices are entirely conceived and designed to guarantee the best requirements in terms of microbiological, physical-chemical and organoleptic properties; the entire production process and software development are managed internally, as well as installations and commissionings which are carried out with WS's own resources.

WS' products for beverage industry are:

- **water purification plants** (mechanical filtration, microfiltration, reverse osmosis, UV disinfection, sterilisation) designed according to the Customer's exigencies and the chemical analysis;
- **sugar dissolving systems** (single batch, double batch and continuous up to 35.000 l/h);
- **semiautomatic and automatic syrup rooms;**
- **premix units;**
- **flash pasteurising units;**
- **ozone generators;**
- **carbonating equipments** (water, wine, beer, soft drinks);
- **in line syrup blending systems and ingredients mixing systems;**
- **steam sterilisable microfiltering**



Mass control premix unit

- systems** (juices, beer, wine);
- **mineralising equipments;**
- **equipment for preparation of non-chemical bottles rinsing and disinfecting solutions** (such as ozone) and chemical solutions preparing devices (peracetic acid, hydrogen peroxide, chlorine, etc.);
- **equipments for the preparation of sterile water;**
- **manual and automatic CIP systems.**

Thanks to its skill and process expertise, today WS is widely present worldwide even with turnkey solutions including ancillary equipment (cooling equipment, boilers, etc.).

WS' philosophy is to manufacture high quality and reliable equipment, equipped only with top brand components: ALFA LAVAL, ENDRESS+HAUSER, PALL, ANTON PAAR, SIEMENS, FESTO, SPIRAX SARCO are the typical components our Customers will find on Their plants. The choice of providing only state-of-the-art solutions has brought us to be appointed as officially authorized integrator by ALFA LAVAL.

Between main technical references, WS can list the supply of two fruit juice

tubular flash pasteurizers for aseptic filling to ORANGINA-SCHWEPPE in France; furthermore, it's significant to point out that WS is included in NESTLÉ WATERS' authorized suppliers list for water purification systems: recently an important contract for the supply of a top-technology water treatment plant in the far East has been finalized. Amongst last supplies (early 2016), WS also boasts a complete line for soft drinks production in Las Vegas - USA (Coca Cola co-packer): from water treatment to hot fill pasteurizer, through sugar syrup preparation and ingredients mixing, also including CIP equipment. WS consider Customer Service one of the greatest keys to success: entire business, marketing, sales and profits depend on Customers' satisfaction so the after sales team is constantly trained to perform the simplest solution in the shortest possible time to support the Customer's business. 🏢

www.watersystems.it



XNEXT

ADVANCED INSPECTION TECHNOLOGY

TAILORED SOLUTIONS FOR ALL YOUR INSPECTION NEEDS



XNEXT® INTRODUCES XSPECTRA®, THE MOST ADVANCED FOOD INSPECTION TECHNOLOGY

In 2018 there were in the European Union 136 alerts for dangerous foreign bodies (FBs) contained in the food products, with an increase of about 35% compared to the previous year.

This data is the reason why Xnext® was created to respond to the new industrial and commercial challenges of our time, introducing an extremely capillary and effective control system that saves companies time and money, and drastically reduces the number of products that are recalled from the market due to consumer complaints.


No matter how much care is taken in choosing healthy and organic food, no matter how much attention is given to the production chain, this initial data highlights how far there is still to go in the field of food inspection.

Given that the most frequent contaminant found in company analyses is plastic, which is highly harmful to the body and increasingly common in organic raw materials, new solutions to the problem are required, namely relying on more efficient methods using more detailed multi-level analysis.

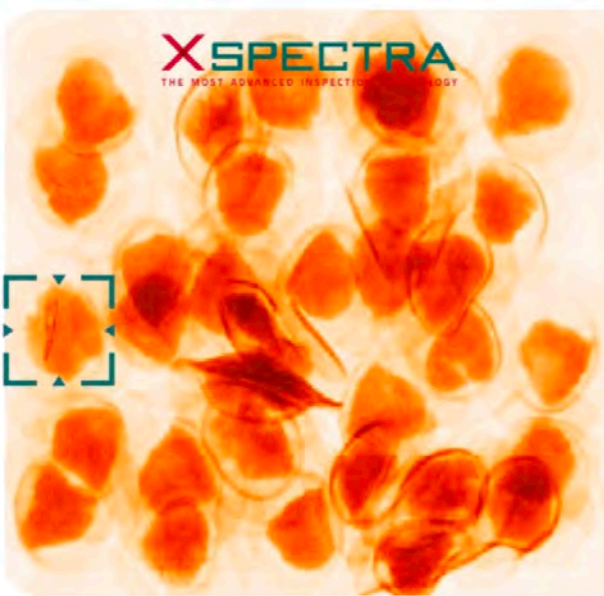
Xnext® has developed the heart of its x-ray multi-energy system, XSpectra®, to further increase the quality of supply chain control.

XSpectra® is based on inspection technology that is capable of detecting even very low-density foreign bodies and is designed to interact seamlessly with every production system currently on the market.

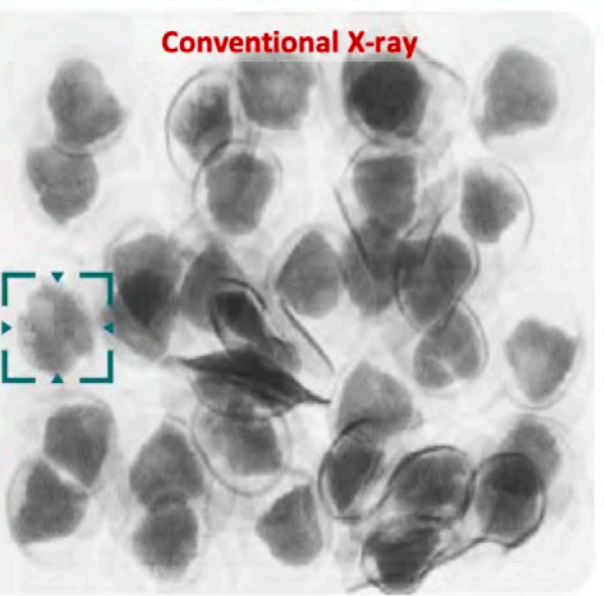
The inspection machine is usually inserted at the end of the production chain in order to find most contaminants at once, but can be inserted into all three main stages



Carapace fragment
in filled pasta



XSPECTRA
THE MOST ADVANCED INSPECTION TECHNOLOGY



Conventional X-ray



Xnext® was created
to respond to the new industrial
and commercial challenges of our time



In the pictures you can see the analysis made by Xspectra® compared to a normal technology on the market.

of the production chain, at the start with an analysis of the external contaminants of the raw materials, after the food components have been processed, and directly in the final inspection when the product has already been provided with its outer packaging, where a further analysis is carried out to assess the condition of the package and its final contents before being placed on pallets for shipment. Analyses are carried out using a multilevel approach based on photonics and nuclear electron-

ics, which are brought together using artificial intelligence algorithms.

This system is the result of 9 years of research and, compared with current inspection systems, allows very low energies (below 5 keV) to be analyzed, which is necessary to detect materials of very low density.

In concrete terms, Xspectra® analyses the interaction of x-ray photons at different energies, and compares the energy of the photons absorbed

by the product and the various contaminants present in and on the surface of it, if this were present (because different materials absorb energy differently).

In just a few milliseconds it generates a chemical and physical analysis of every product on the production line, whether loose or packaged, and identifies the contaminants present.

The great revolution lies in the fact that, while most analysis systems can only find high-intensity materials such as metal, stone or glass, Xspectra® can also detect very low-intensity contaminants such as nuts, insects, wood, and plastic.

Common examples of products rejected by Xspectra® include wood found in glass jars containing olives, pieces of nitrile gloves in chocolate bars, rubber bands inside tomato cans, pieces of carapace in filled pasta, and Pit and EPDM gasket fragments in sandwich bread. 🏢

www.x-next.com

XNEXT
ADVANCED INSPECTION TECHNOLOGY



GREINER PACKAGING DEVELOPS SUSTAINABLE CARDBOARD-PLASTIC PACKAGING

FOR NEW SOMAT EXCELLENCE 4IN1 DISHWASHER CAPS FROM HENKEL

As a manufacturer of sustainable plastic packaging, Greiner Packaging is constantly in the business of responding to new product types and requirements. One recent example is the new Somat Excellence 4in1 dishwasher caps from Henkel.

These use a unique technology that combines powder and three solid gel chambers, which consumers will only have seen from laundry detergent products to date. The caps are securely packaged in cardboard-plastic combinations and an innovative lid solution from Greiner Packaging.

Brand owner Henkel is now using the sustainable cardboard-plastic tubs from Greiner Packaging, which contain 50 percent postconsumer recycled PP from end consumer households, in a new, innovative product for the Somat brand.

The tubs previously received the World Star Award 2021 in recognition of the packaging for Persil 4in1 Discs, another Henkel product. This is a great example of how Greiner Packaging and Henkel continue to develop together based on a close, ongoing relationship – including making their packaging solutions more sustainable.

“Our longstanding customer Henkel was looking for an innovative, end-to-end packaging solution for the new Somat Excellence 4in1 caps, which are dishwasher detergent capsules containing both powder and three



Sustainable with a perfect seal: The new dishwasher cap packaging solution produced by Greiner Packaging for Henkel, featuring a tub that contains 50 percent r-PP.

solid gel chambers. An effective seal to prevent moisture from getting into the packaging was especially important, and Greiner Packaging delivered an ideal solution by providing both the tub and lid,” says Andreas Auinger, global senior customer projects manager at Greiner Packaging. “The main challenge in developing this packaging was the product inside, as the 4in1 caps are extremely sensitive to moisture. So the key requirement for the packaging was to ensure a perfect seal during both transport and storage,” Auinger adds.

Tub made from recyclable material for positive environmental impact

Thanks to its innovative, patented tear-off system, the cardboard wrap and the plastic tub can be easily separated and recycled. Because the two components can be separately added to their respective recycling loops, the consumer benefits from a highly recyclable packaging solution. The wrap is made of cardboard consisting of nearly 100 percent recycled material. Greiner Packaging uses a two-stage process for the plastic tub

itself: The inside of the plastic tub is made from white virgin material, which guarantees an optimal color contrast with the colorful 4in1 caps.

The packaging's outer coating, meanwhile, contains 50 percent r-PP obtained from end consumer households. This layer's gray color has no impact on the packaging's look, because it comes wrapped in an attractively printed cardboard sleeve.

Innovative lid for impenetrable seal

Greiner Packaging also supplies the lids for Henkel's new packaging for Somat Excellence 4in1 caps. The team developed a special concept for Henkel, featuring a sealing film that is built into the lid to provide an outstanding seal. Plus, the opening of the tub is calibrated ahead of time so that it fits with absolute precision – and the lid and tub fit together perfectly.

These two special characteristics of the lid guarantee the best protection for the caps along with a top-class seal to prevent moisture from getting in.

"The new packaging for the Somat Excellence 4in1 dishwasher caps stands out not only thanks to its sustainable properties and premium shelf appeal but also because of its high degree of technical functionality. Based on our experiences with other similarly designed packaging solutions, we already know that this type of smart, sustainable packaging from our partner Greiner Packaging is a big hit with consumers. Besides the new innovative Somat Excellence 4in1 caps, we also use the same packaging principle for the Somat Gold dishwasher tablets," notes Carsten Bertram, senior manager for international dishwashing packaging development at Henkel.

Logistical excellence with K3®

Cardboard-plastic combinations also impress when it comes to logistics in the form of K3®-F packaging solutions. These lids, plastic tubs, and folded cardboard wraps are delivered separately to Henkel. Greiner Packaging's longstanding joint venture partner, Cardbox Packaging, supplies the wraps, which are then folded and slipped over the tub directly before filling at the company. This ensures a high degree of flexibility in production and keeps stocks to a minimum. 🏢

www.greiner-gpi.com



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Online auction food processing machinery, bakery and catering equipment in Eindhoven (NL)



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Online auction bakery production line and machinery on behalf of Aryzta in Lutherstadt Eisleben (DE)



Online auction machinery for the food industry in Kapelle (NL)



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Find and bid

Win

Pay and pick up

www.Industrial-Auctions.com

SOLVE FERMENTATION CHALLENGES THROUGH APPROPRIATE VALVE SELECTION

By Rodolphe Karpe, Product Marketing Manager, Fluid Control and Pneumatics, Europe at Emerson

With the explosion of craft beers, demand for new wine blends and rise of international distilleries, the alcohol business is booming. This proliferation has given consumers more choices than ever and expanded the alcoholic beverage market both regionally and around the world.

Whether you're a small-town brewer, boutique winemaker or multimillion-dollar global brand, it's essential that your products maintain the same high levels of quality and taste to keep up with demand, despite such variability.

The secret to meeting customer expectation every time lies in your fermentation process. To ensure quality, consistency and taste across various beverage styles and flavors, the fermentation process requires exact temperature control. To precisely control heating and/or cooling parameters, control tanks must be equipped with the right valve system.

Too often, valves experience short service lives and other performance issues that can cause temperature fluctuations — compromising bev-



The fermentation process in the beverage industry requires precise temperature control



erage quality and costing precious time and money.

Common Obstacles Make Tank System Upgrades Difficult

Alcoholic beverage producers typically control tank temperatures, and therefore the fermentation process, using glycol or ammonia systems.

Depending on your system, it's also important to select valves that are

rated to handle the appropriate medium. In propylene glycol systems, for example, this nontoxic liquid medium flows through thermal jack-

ets surrounding the fermentation tanks. In a closed circuit, the glycol is pumped through and cooled in a chiller before it flows back down through the jackets. The chilled glycol then cools the tanks and their contents.

Because fermentation is such a vital process, it's no surprise beverage makers look for opportunities to install or upgrade their tank cooling and heating systems. But these modifications aren't without their challenges. Many facilities, particularly smaller operations, have limited physical space.

As a result, tank systems need to be positioned as close as possible to each other to maximize floor space and remain accessible during maintenance — making innovative yet costly tank designs a necessity.

Other challenges include:

- **High energy costs.** Energy is one of the largest overhead costs in the food and beverage industry — including alcoholic beverage production. Because fermentation is considered a wet environment, beverage makers also need to have additional electrical safety features in place.
- **Extensive installation and maintenance.** Depending on the size and number of tanks, the labor required for piping and wiring can be costly and time-consuming. In addition, maintenance and upkeep become all the more complex — increasing potential downtime.



EMERSON™



• **Possible product loss.** For wineries, in particular, any issues that compromise batches during extended fermentation periods equate to several years' worth of lost time, materials and cost.

In addition to ensuring precise temperature control, proper valve selection can address the challenges associated with installing, maintaining and upgrading fermentation heating and cooling systems.

By choosing the right valves, you can save equipment space, conserve energy and optimize productivity.

How To Select Valves That Overcome Fermentation Challenges

Whether you're spending too much time on piping or you're a startup operation with limited resources and space, Emerson can help you select the right fluid automation product to meet your unique needs. In addition to their reliability and durability, our products provide the industry's longest expected service life — maximizing your uptime during every precious minute of the beverage-making process.

Choose from the following valve solutions, all of which are suitable for systems using glycol or ammonia:

Two-Way Valves. Two-way valves are a traditional, tried-and-true valve type for fermentation heating and cooling systems.

These high-flow solenoid valves come in a range of pressure ratings, sizes and resilient materials like brass or stainless steel — providing long service life and low internal leakage. Many feature low electrical consumption and are mountable in any position — boosting their installation flexibility in tight or limited configurations. Look for an IP65 rating for use in fermentation and other wet environments.



IP washdown solutions eliminate contamination and protect components from corrosion that may cause downtime



High-flow solenoid valves, such as the ASCO Series 8210, provide long service life and low internal leakage in heating and cooling systems

Solenoid Valves. Solenoid valves include several electrical enhancements that achieve even greater energy savings and longer service life.

Look for valves that incorporate power management circuits, as well as electrical surge suppression to both the solenoid and electronic controls. These features result in energy savings that can lower your total cost of ownership by 14 percent.

In addition, these valves accept both AC and DC voltages without sacrificing flow or pressure specifications, increasing DC performance up to 500 percent by today's industry standards.

Because the valve's DC characteristics now rival AC pressure and flow values, you can eliminate AC output cards to simplify control, reduce wiring costs and provide safer working environments for DC users.

Solenoid valves also eliminate the hum associated with AC voltage and have expanded AC and DC operating temperatures. They also extend product life through low solenoid temperature rise, and they meet UL, CSA and CE approvals and RoHS 2 compliance.

Angle Seat Body Valves. Air-operated, direct-acting angle body seat valves are ideal for aggressive and high-viscosity fluids. Many models feature a straight-through design and wide range of advanced options, including a signaling box, compact positioner for proportional control and stroke limiter.

These valves are the preferred alternative to diaphragm and ball valves. They allow tight shutoff in both directions and contain no bleed holes, eliminating the chance of glycol plugging and the possibility of related tank temperature fluctuations. They are also one-third the cost of ball valves and last up to 10 times



The ASCO Series 290 is a pressure-operated, direct-acting, angle seat-body valve built for demanding applications such as fermentation

longer. Many angle seat body valves are designed to handle back pressure, eliminating the need for check valves, and feature a rugged, stainless steel body that resists sulphur vapor in processes like winemaking.


Automation Further Improves Temperature Control

In addition to proper valve selection, it's important to consider automating your fermentation heating and cooling systems to achieve even greater thermal precision. For example, the G3 Electronic Fieldbus Platform makes this process quick, simple and painless.

G3 integrates communication interfaces and input/output (I/O) capabilities into your pneumatic valve manifolds, which enables your PLC to more efficiently turn valves on and off, as well as channel temperature data from resistance temperature detector (RTD) sensors. Compact and modular. G3 includes

a range of innovative features to enhance your fermentation operation, including a graphics display for easy commissioning and fault diagnosis, as well as compatibility with a range of industrial communication protocols, including Ethernet, PROFINET, DeviceNet and many others.

The right valves in combination with the G3 automation platform provide a single solution that overcomes many of the challenges preventing alcoholic beverage makers from installing, expanding or upgrading their fermentation systems.

In addition to saving space, conserving energy and improving critical uptime, this combination delivers the peace of mind that comes with knowing your beverages — no matter the style, flavor or blend — are achieving only the highest levels of quality, consistency and taste. 

www.emerson.com

WOULD YOU LIKE A SIDE OF MOLD, SIR?

When former British Prime Minister, Teresa May, proclaimed that she wasn't opposed to scraping off mold from the top of a jar of jam and eating the product underneath, it sparked a conversation about what mouldy foods were safe to eat. Here, industry network leader for ABB's food and beverage segment, Darcy Simonis, looks at the advancing methods food producers are using to monitor the safety of their products.

On the whole, eating mouldy food is not an advisable practice – mould is the scourge of the food industry with producers striving to deliver the freshest produce possible to their customers. However, the world of technology is rapidly advancing, with applications making their way into all areas of food production, which is helping manufacturers to combat unnecessary food spoilage and waste.

In an industry where the demands of the customer are ever evolving, it is hard for food manufacturers to keep up with the latest trends. This is where data analytics can come into play, giving a level of insight that is invaluable.

The use of data analytics in marketing and customer insight is well known, but its uses can go far wider, helping food producers to keep their products at the pinnacle of quality and freshness.

Over the course of time, the quality and the characteristics of a product can change. Yet, by using integrated data analytics, manufacturers can learn more about the factors that



**ABB**



affect the shelf life of their products. This information can then be used to adapt the product or process to increase shelf life, potentially saving the manufacturer money and time, as well as reducing food waste.

Data analytics also has its uses when maintaining and improving the quality of a consumable product. For instance, during the beer brewing process, monitoring alcohol levels is critical and is something that is regularly analyzed. However, it is a time-consuming process and can be disruptive to the production line. As a result, there are new methods coming into play that allow testing to be carried out without disrupting production and data analytics is being used to measure whether these methods are as insightful and effective as the traditional wet chemistry method.

Monitoring and analysis in the food and beverage industry is vital – customers demand that their favorite product tastes the same no matter where

they are in the world or where it was manufactured or packaged. The process requires strict control and repeatable standard solutions that can be rolled out across multiple production sites.

Manufacturing Execution System (MES) services from ABB comprise of a wide portfolio of visibility and transparency of the complete end-to-end process, from incoming raw materials to the finished shipped product. The MES incorporates functions such as equipment maintenance management, genealogy tracking from raw material as well as material tracing and tracking management. All these features are designed to support food and beverage manufacturers maximize the performance of their plant.

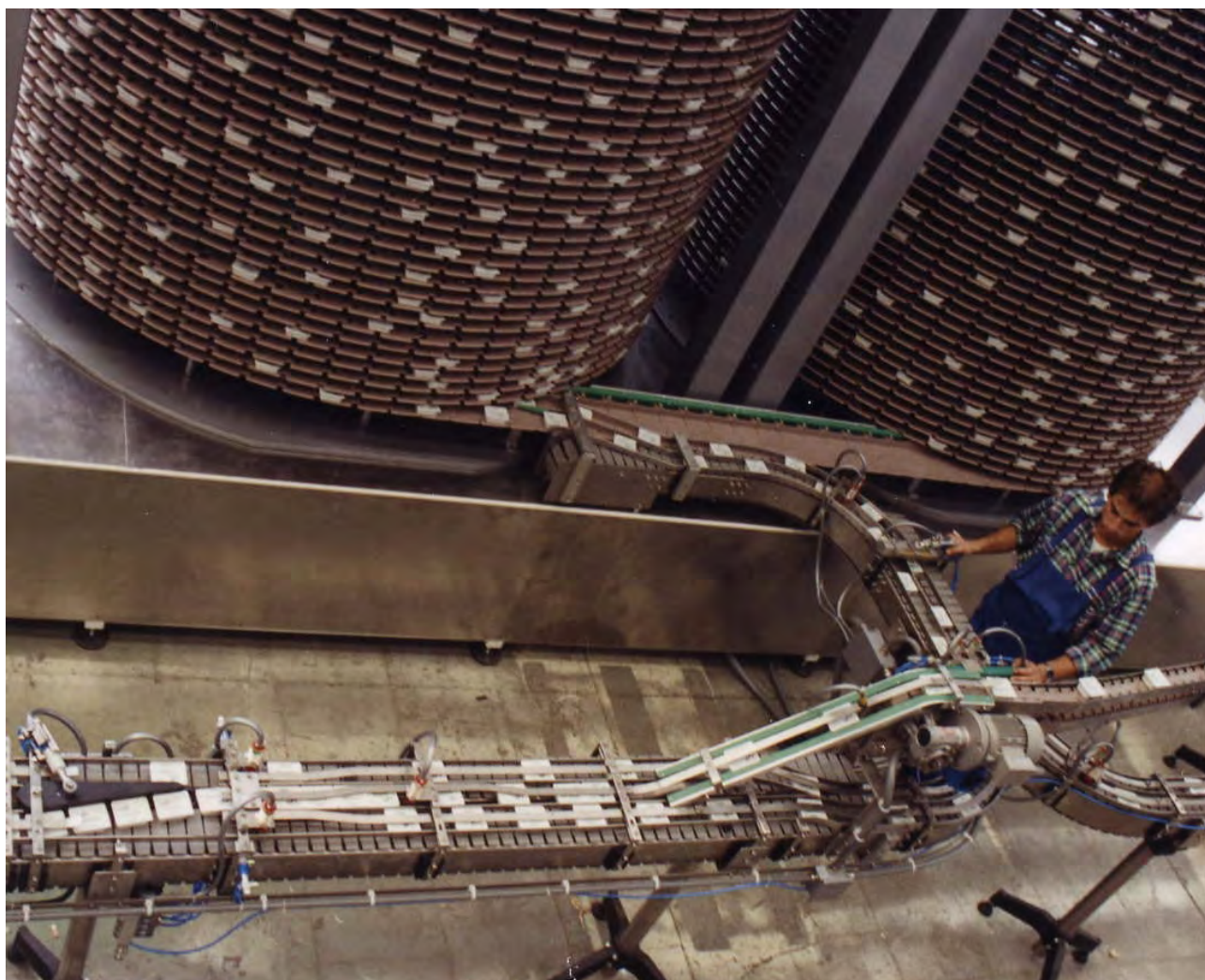
So, even if your customers tastes are as strange as Teresa May's, by incorporating rigorous monitoring and data analysis across your manufacturing facility, you can be sure that your product is at its very best when it reaches the customer. 🏠





CONVEYORS FOR COOLING APPLICATIONS

Cooling and Freezing of food products is in most cases an integral and final part of the processing line just before the primary packaging.



The typical machine in these cases is a spiral conveyor that can work either in ambient temperature or in air conditioned or refrigerated cabinets, even if some straight freezing tunnels are still sold, they are not even closely as popular.

In this article we are going to concentrate on the main conveyor technologies used for these applications, spi-

als conveyors are not all the same and each technology has its ups and downs that should be taken into consideration for the overall machine selection. All the systems are based on a sideflexing chain and what we have been seeing is polymers constantly replacing steel, now not only for the body of the chain but also for the connection pins. Modular chain give huge advantages for maintenance and sanitation and new materials are increasing the versatility in terms of tempera-

ture range and properties for direct contact with food products.

The first technology on our is the **side drive**, in this case the chain is pulled by pinions placed on each spire on the outer edge of the spiral conveyor. These pinions are connected with the same shaft and joint; depending on the configuration and speed multiple shafts with pinions may be needed on different sizes of the spiral. The downside of this system is immediately evident due to the complicated mechan-



ics and extra safety enclosure needed, but on the up side the side drive gives almost unlimited flexibility in terms of layout and configuration allowing oval tracks and intertwined spires that give great benefits in terms of space occupation. This technology has been available for quite a long time now, so it's mature but far from fading and the switch to plastic modular chain promise interesting developments.

The introduction of modular chain is what drove the development of the **drum drive** technology that allowed to use normal sideflexing modular chain for the longest conveyors section without any special reinforcement. The whole concept of the drum drive is to have a rotating drum (either continuous or a cylindrical cage) inside the spiral on which the chain is pulled.

The drum will move at a little bit higher speed compared to the one required by the conveyor (called overdrive) and doing so will pull the chain applying low tension. The advantage of being able to drive many meters of chain,

filled with products, with just two motors (one of the drum and one to help the chain to get out from the drum) is significative even if balanced with the complication of the chain tensioning system as well as a control system that allow to finely adjust the speed of the drum to the correct overdrive speed. Another downside is that the configuration of the spiral is pretty much fixed to a cylindrical shape with just the possibility to choose the position of in and out.

Kind of a middle way between the two solutions above there is the **direct drive** system, also thought for a modular chain, this uses a rotating drum too, but this one acts as a giant sprocket, actively engaging the inner side of the chain. It retains the same low tension capacity of the drum drive as well as simple mechanics and low number of motors, but its limit is still the circular configuration only, while resolving the issue of the control system for the overdrive speed.

Last but not least, **M.H. Material Handling** has another quite unique

solution that can be used only after the primary packaging but is extremely compact and allow many meters of conveyor even with products in a single row.

The **Heliflex System** is a special table top chain that uses double rotating drums with direct drive concept (so the drums act as pinions), that uses a single motor. It is suitable for a niche of applications, mainly the cooling of melted cheese after the wrapping and of ready-made dishes in open or sealed trays. While being limited to the packed product and to one or two lanes, the Heliflex still is a great deal after primary machines allowing to make the cooling in a compact footprint with competitive costs. 🏢

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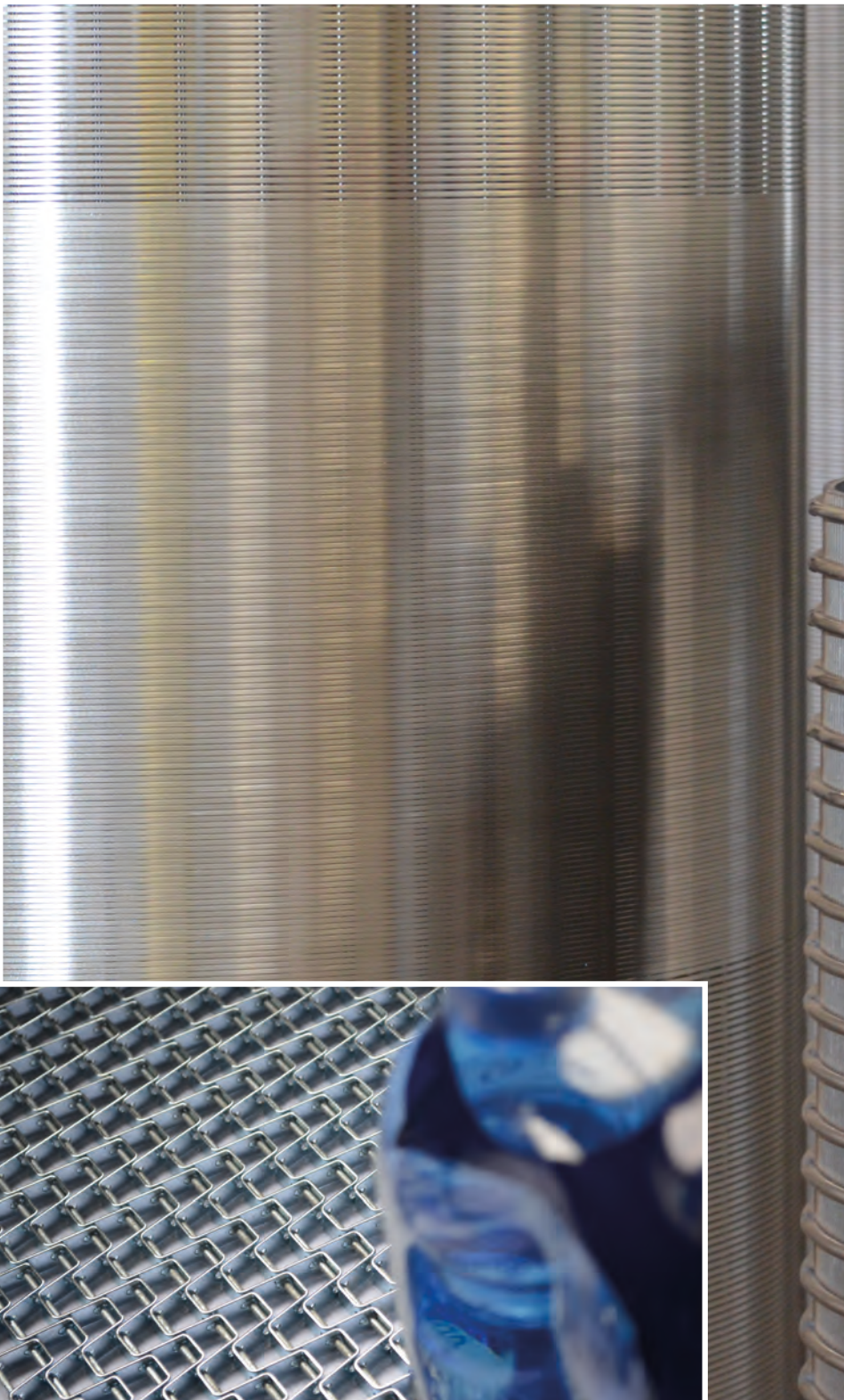
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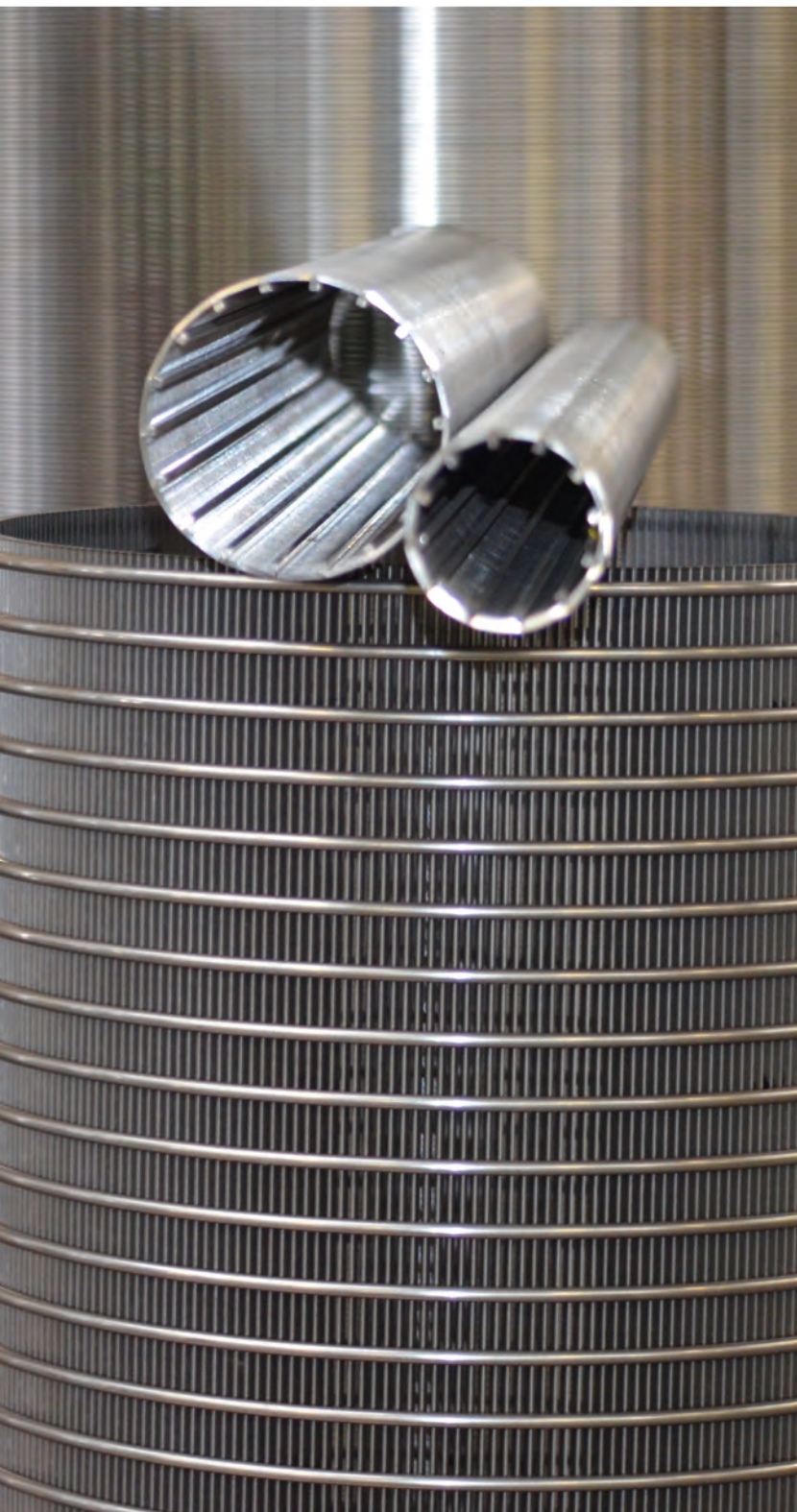
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EXHIBITIONS - EXHIBITIONS

2021-2022

SIGEP

15-17/03/2021

RIMINI

Fair for bakery, pastry, ice cream, coffee.



mcTER

12/04/2021

ROME

Exhibition on energy efficiency.



mcT COGENERAZIONE

21/09/2021

MILAN

Exhibition for cogeneration.



FACHPACK

28-30/09/2021

NUREMBERG

International packaging trade fair.



MEAT-TECH

22-26/10/2021

MILANO

Fair for the meat and ready meals industry.



HOST

22-26/10/2021

MILANO

Fair for bakery production and for the hospitality.



SAVE

27-28/10/2021

VERONA

Fair for automation, instrumentation, sensors.



mcT ALIMENTARE

28/10/2021

BERGAMO

Fair on technology for the food&bev industry.



MECSPE

23-25/11/2021

BOLOGNA

Fair for the manufacturing industry.



SIGEP

22-26/01/2022

RIMINI

Fair of ice-cream, pastry, confectionery, bakery.



PROSWEETS

31/01-02/02/2022

COLOGNE

Fair for the sweets and snacks industry.



INTERSICOP

19-22/02/2022

MADRID

Fair for bakery, pastry, ice cream, coffee.



FRUIT LOGISTICA

09-11/02/2022

BERLIN

Fair for fruit and vegetables.



BEER&FOOD ATTRACTION

20-23/04/2022

Rimini

Fair for beers, drinks, food and trends.



COSMOPROF

10-14/03/2022

BOLOGNA

Fair for the cosmetic production chain.



ProWein

27-29/03/2022

DUSSELDORF

International wine & spirits exhibition.



MIDDLE EAST 2021/22

GASTROPAN

21-23/09/2021

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Fair for the bakery and confectionery industry.



GULFOOD MANUFACTURING

07-09/11/2021

DUBAI

Fair for packaging and plants.



HOSPITALITY QATAR

09-11/11/2021

DOHA

Fair of Hospitality and HORECA



PROPAK VIETNAM

10-12/11/2021

SAIGON

Fair for packaging, bakery, pastry.



WOP DUBAI

22-24/11/2021

DUBAI

Fair for for fruits and vegetables.



DJAZAGRO

22-25/11/2021

ALGERS

Fair for companies of the agro-food sector.



ANUTEC

02-04/12/2021

NEW DELHI

Fair for the food&beverage industry.



PACPROCESS FOOD PEX

09-11/12/2021

MUMBAI

Fair for product from packaging.



GULFOOD

13-17/02/2022

DUBAI

Fair for food and hospitality.



IRAN FOOD BEV TEC

07-10/06/2022

TEHRAN

Fair for food, beverage&packaging technology.



PROPAK ASIA

15-18/06/2022

BANGKOK

Fair for packaging, bakery, pastry.



GULFHOST

08-10/11/2022

DUBAI

Fair of hospitality.



EXHIBITIONS - EXHIBITIONS

EXHIBITIONS

2021-2022-2023

VINITALY

10-13/04/2022

VERONA

International wine & spirits exhibition.



LATINPACK

26-28/04/2022

SANTIAGO CHILE

International packaging trade fair.



ANUGA FOODTEC

26-29/04/2022

COLOGNE

Fair on food and beverage technology.



CIBUS

03-06/05/2022

PARMA

Fair of food product.



IPACK-IMA

03-06/05/2022

MILANO

Exhibition for the packaging industry.



MACFRUT

04-06/05/2022

RIMINI

Fair of machinery and equipment for the fruit and vegetable processing.



SPS/IPC DRIVES/ITALIA

24-26/05/2022

PARMA

Fair for industrial automation sector.



HISPACK

24-27/05/2022

BARCELONA

Technology fair for packaging.



FISPAL

21-24/06/2022

SÃO PAULO

Fair for product from packaging.



POWTECH

30-08/01-09/2022

NUREMBERG

The trade fair for powder processing.



DRINKTEC

12-16/09/2022

MONACO

Fair for the beverage and liquid food industry.



SIAL

15-19/10/2022

PARIS

Fair on food products.



SUDBACK

22-25/10/2022

STUTTGART

Fair for bakery and confectionery industry.



BRAU BEVIALE

08-10/11/2022

NUREMBERG

Fair of production of beer and soft drinks.



SIMEI

15-18/11/2022

MILANO

Fair for vine-growing, wine-producing and bottling industry.



ALL4PACK

21-24/11/2022

PARIS

Exhibition about packaging technology.



INTERPACK

04-10/03/2023

DÜSSELDORF

Fair for packaging, bakery, pastry.



TUTTOFOOD

08-11/05/2023

MILAN

International B2B show to food & beverage



IBA

22-26/10/2023

MONACO

Fair for the bakery and confectionery industry.



RUSSIA CHINA

AGROPRODASH

04-08/10/2021

MOSCOW

Fair of machinery and equipment for agroindustrial industry.



UPAKOVKA

25-28/01/2022

MOSCA

International packaging machinery exhibition.



MODERN BAKERY

22-25/03/2022

MOSCOW

Fair for bakery equipment and food ingredients.



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MOSCOW

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