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n° 12-2023

FOOD

PROCESSING

it. MAGAZINE

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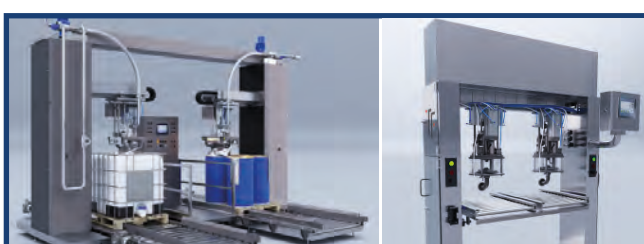
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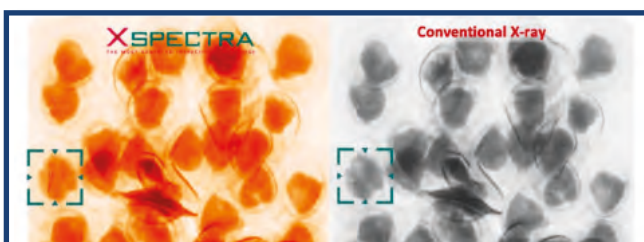
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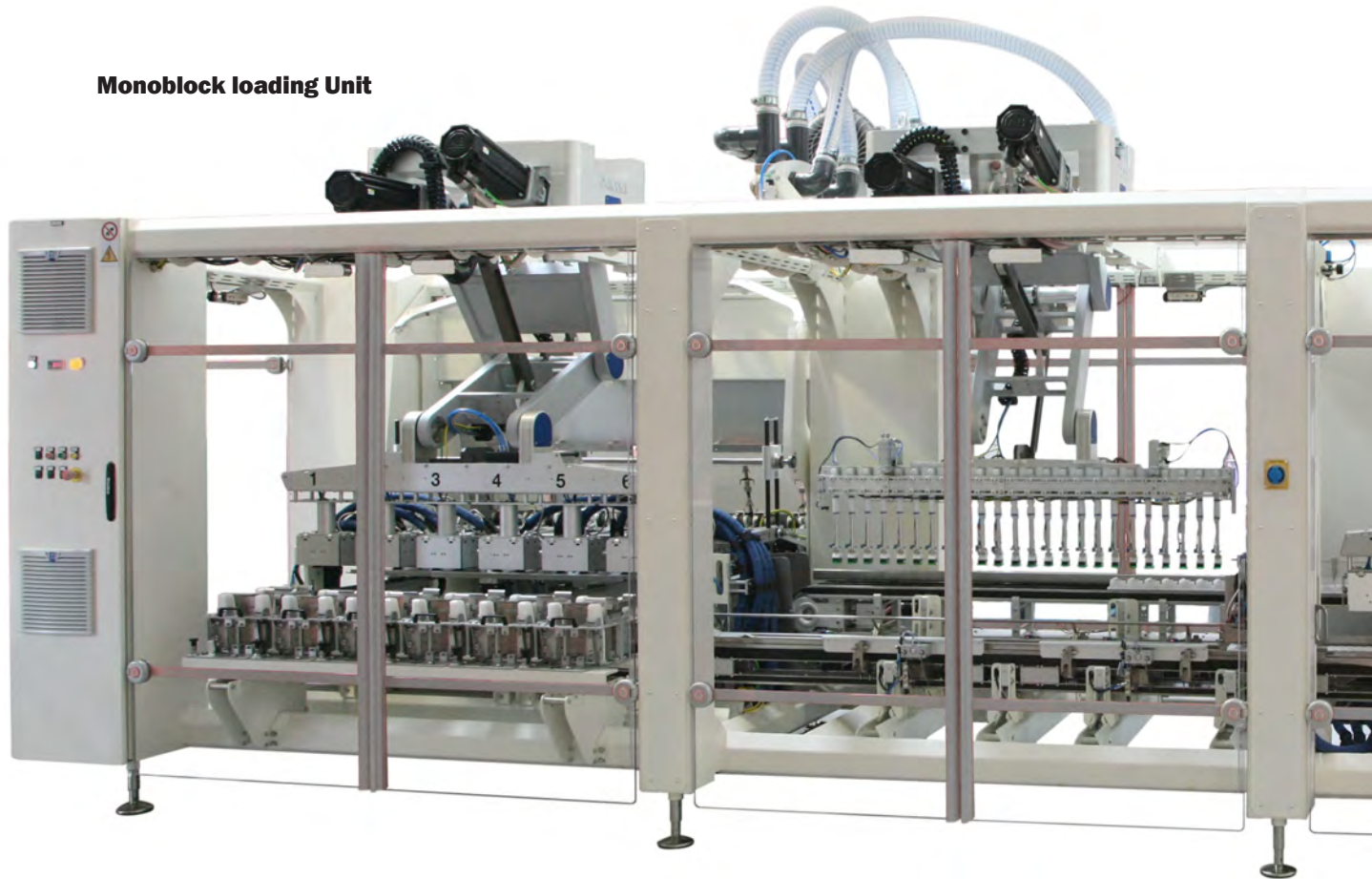
INDIAN PACKAGING DEMANDS MET BY CLASS-LEADING EUROPEAN TECHNOLOGY

Advanced secondary packaging solutions, backed by local service and support proves to be a winning combination

In the food and beverage industry in India, Vedic Pac-Systems has created a reputation for service, supply and delivery of advanced solutions for just about every stage of the production process – from ingredients through processing and onto primary and secondary packaging.

Offering solutions from many leading European companies, Vedic can handle the entire installation, commissioning and support process, following machine design and fabrication the supplier. “In some cases, we also create control and SCADA solutions for customers,” explains Nirav Sampat, Managing Director at Vedic,

Monoblock loading Unit



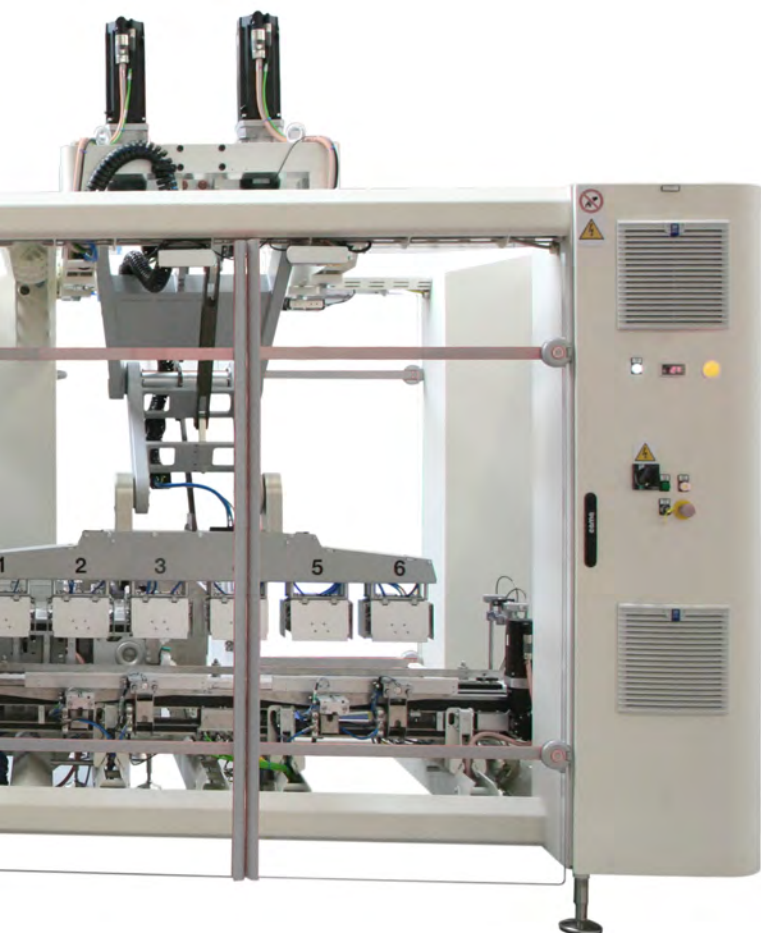


“based on the unique needs of the Indian market. We also offer complete after-sales support too, stocking critical spares to help our customers maintain 100 % uptime.”

One of Vedic's suppliers is Italian secondary packaging expert Cama Group. “Secondary packaging is a tough sell in India,” Sampat explains. “Lower labour costs mean that automation is not always seen to be cost efficient. However, when you ask customers about higher throughputs, reduced plant real estate and the quality and repeatability you get from automation, it becomes far easier to justify the investment.”

The snacks market is expanding in the region, as are noodles, bakery and chocolate, all of which are closely coupled to consumer demands and changing trends. These expanding markets need technology that not only has the power and capability to keep pace with growing output, but also the agility to adapt to ever-changing trends.

“Many of our Indian customers are curious about newer technologies and are especially interested in Cama,” Sampat elaborates, “the machines they ship to us are easy to use, easy to learn and match the global standard of many of the leading blue-chip brands. We have seen some major successes with Cama technology, including a noodle packaging machine that broke the speed record for both Cama and our customer. I can almost guarantee a semiautomatic secondary packaging process would not come anywhere close this level of performance and accuracy!”





As the Indian food and beverage industry and its supply chains evolve, new possibilities open up for wider deployment of particular products. Like other global markets, as these become established, new technologies are required to cater for rising demand and customer choices.

Vedic Pac-Systems is a supplier of advanced technologies from leading industry suppliers and covers the entire food value chain. With secondary packaging becoming a more important (and higher-capacity process) its established relationship with the Cama Group will bring many operational benefits to its Indian customer base. 🏢

www.camagroup.com
www.vedicsystems.com



बेहतरीन और प्रीमियम गुणवत्ता वाले उपकरण, नवीन तकनीकी समाधान और कुशल ग्राहक सहायता सेवाएं देने के लिए वैदिक पीएसी सिस्टम्स प्राइवेट लिमिटेड एक विश्वसनीय और स्थापित नाम है।

40 से अधिक वर्षों के अनुभव, विशेषज्ञता और भारतीय कन्फेक्शनरी, चॉकलेट, बेकरी, मसाला, खाद्य और स्वास्थ्य सेवा उद्योगों को टर्नकी समाधान देने में एक मजबूत ग्राहक-केंद्रित दृष्टिकोण ने वैदिक पीएसी को अपने सम्मानित ग्राहकों और इसके प्रतिष्ठित प्रधानाचार्यों दोनों के लिए भरोसेमंद साथी बनाया है।
 वैदिक पीएसी कामा समूह जैसी कई प्रसिद्ध और स्थापित कंपनियों का भारत में विशिष्ट एजेंट, भागीदार और प्रतिनिधि है।

संस्कृत शब्द 'वेद' का अर्थ है ज्ञान और बुद्धि, और यह 'विद' मूल से लिया गया है, जिसका अर्थ है 'जानना'। वैदिक पीएसी के पास एक विश्वसनीय पेशेवर और उद्यमी टीम होने का एक दृष्टिकोण है, जो निरंतर सीखने और अपने ग्राहकों की आवश्यकताओं को पूरा करने के लिए प्रतिबद्ध है।



Labelling the Future

MODULARITY, FLEXIBILITY, PRACTICALITY.

Labelling in the Beverage, Food, Detergent and Pharmaceutical industries has always been our passion and our core business. Innovative technologies, an international sales and after-sales service network and operational flexibility are our strengths. Satisfying every labelling requirement from 1,500 to 50,000 bph is our result, appreciated by companies of all sizes. The more than one thousand one hundred systems now present all over the world is our greatest confirmation.



MAK machine configuration with HS2 adhesive units



Example of configuration with cold glue stations



MAK machine configuration with HS SLIM adhesive units



Cold glue stations



Adhesive stations (SLIM)



Roll-Feed stations



Hot-melt stations

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MAKRO LABELLING: TECHNOLOGY IN EVOLUTION ON THE SMALL AND LARGE SCALE

Modularity, flexibility and practicality are key concepts in a company whose strong point is technological innovation and development. This is what the market wants and this is what customers get from the Italian based Makro Labelling, international standard setter for industrial labellers in the beverages, food, detergent and pharmaceutical sectors. The thirty years' experience of its founders, a team of 130 people, a dense and well-organised sales network consisting of the branch offices Makro UK for the United Kingdom and Makro North America in Saint-Philippe (Montreal) for Canada and the USA, together with agents and representatives in the most important countries throughout the world, plus an impeccable assistance and spare parts service guarantee satisfaction of every labelling need and constant expansion on all the most important international markets.

A range of labellers for production speeds of 1,500 to 50,000 b/h

The range includes labellers able to process from 1,500 to 50,000 bottles per hour, applying up to five labels per bottle and available in wet glue, hot melt, self-adhesive

and combined versions. For companies with limited production requirements, the MAK 01, MAK 02 and MAK 1 labellers provide speeds of up to 12,000 b/h with mechanical or electronic rotation of the bottle plates. With special applications and able to cope with production speeds of up to 50,000 b/h, the MAK 2, 3, 4, 5, 6, 7, 8 and 9 labellers, on the other hand, satisfy the needs of medium to large companies. The range includes a high speed self-adhesive labeller with reel winders and non-stop system enabling production to continue at maximum speed even during reel changes and a combined labeller to apply the fiscal guarantee seal. Thanks to a special, patented paper delivery system, the new MAK AHS2 self-adhesive labelling module responds to the need for faster, more precise machines. It guarantees a linear speed of 100 metres a minute at a label pitch of 20 mm. For the high volume PET market, such as the water and soft drinks sector, Makro Labelling has developed the MAK Roll Feed series of rotary labellers: The 6,000 b/h to 40,000 b/h production speed and use of wrap-round plastic labels on a reel with hot melt application guarantee maximum economic benefits in the production process. The modularity of the machine also allows the





roll feed unit to be replaced with a hot melt unit for pre-cut, wet glue or self-adhesive labels.

In common with the entire Makro range with the Vision Control system to verify the quality and correctness of the packaging and manage rejects: two new inspection systems - RAPTOR (Rapide to Orientate) and A.L.I.C.E. (Advanced Label Inspection and Control Environment), which guarantee high performance, less production rejects and the highest finished product quality.

CLeap (Concept Leap)

Makro In 2017 created and presented a new concept of labelling machine using longstator linear motor

technology, setting a new and revolutionary standard. Cleap's concept has led to the creation of the new Inline, which, in addition to high precision and labelling speed, also offers the advantage of no format changeover: in just a few minutes the operator is ready to start production again.

Its versatility and production flexibility make it ideal thanks to its small footprint.

www.makrolabelling.it



मैक्रो लेबलिंग एक गतिशील कंपनी है जिसने तकनीकी नवाचार को अपना मजबूत स्तंभ बनाया है। पेय, भोजन, घर और व्यक्तिगत देखभाल और दवा उद्योग क्षेत्रों के लिए औद्योगिक लेबलिंग मशीनों के क्षेत्र में मैक्रो लेबलिंग आज एक अंतरराष्ट्रीय संदर्भ कंपनी है। एक सघन अंतरराष्ट्रीय वाणिज्यिक नेटवर्क, परिचालनात्मक लचीलेपन के साथ संयुक्त बिक्री पूर्व/ बिक्री पश्चात सहायता सेवा और लगातार विकसित हो रहे बाजार की मांगों का अनुमान लगाने की क्षमता प्रत्येक लेबलिंग आवश्यकता की संतुष्टि की गारंटी यह कंपनी देती है।



WRAPPING UP QUALITY WITH TAILORED PACKAGING SOLUTIONS

Dolcezze Savini is a company based in Tuscany that for three generations has passionately been working in the art of bread and pastry making, using old processing techniques and carefully selected ingredients. From its factories in Valdarno, for over fifty years Dolcezze Savini has been baking high-quality products such as the famous bread cooked in a wood-burning oven, made with Tuscan wheat.



In addition to the different varieties of bread and pizza made with different types of flour, the Valdarno brand boasts a rich pastry production that also includes the typical traditional pastries from Siena produced by the historic company Fiore 1827, acquired by Dolcezze Savini in 2017.

Among these specialities there are three important IGP products: two of them are from Siena and they are Panforte and Ricciarelli, while the almond biscuits named Cantuccini are linked to the Tuscan territory. For a long time, Dolcezze Savini has focused its activity on a production that pays particular attention to the importance of some elements such as natural ingredients, reduced gluten products, palm oil-free products and a clearer labelling system. The current size of the company, which counts more than a hundred employees in total, has not affected the original characteristics of Dolcezze Savini, confirming



Dolcezze Savini's artisanship meets Tecno Pack's technological innovation



Tecno Pack
PACKAGING MACHINES

ifp
PACKAGING

SP
general system pack

its vocation for craftsmanship, its dedication to quality and its desire to be at the forefront of the technology used in its factories.

In this regard, in 2019 the company built a new production plant of over 4,000 meters with the clear intention of investing in technological

innovation. Alongside the integration of two new semi-automatic lines for the production of partially baked bread, the new investment has opened more space for artisanal production with the strengthening of the production of handmade pizza dough. The company has also developed a complete electronic

management system, making it part of the world of industry 4.0. This innovation process has found full achievement in the strengthening of its packaging sector, for which Dolcezze Savini has called upon the group Tecno Pack, a leading company in the supply of packaging technologies.



For over 30 years Tecno Pack has been designing, manufacturing and distributing horizontal packaging machines and automatic packaging systems for the food industry and other sectors. Tecno Pack is a group of companies including Tecno Pack, IFP and GSP. Based in Schio, in the province of Vicenza, Tecno Pack stands out for being a pioneer and innovator in the packaging industry, developing cutting-edge solutions, increasing the digitalization of machines and plants, offering its customers excellent results with limited investments.

The partnership between Tecno Pack and Dolcezze Savini has resulted in the development of three packaging lines, specifically designed by the group for the bread sector

of the Tuscan company. These, in detail, are the new packaging lines implemented in the production system of Dolcezze Savini:

- Monopiega Diamond 650 wrapper. This is an innovative and high-performance shrink wrapping machine, designed to wrap small, medium and large-sized items as well as thin solid products;





- Flow pack ATM FP 025 line suitable for pizza dough and ideal for “pinsa” (a traditional pizza made with an ancient Roman recipe). This horizontal packaging machine is specific for modified atmosphere packaging thanks to the tight packs granted by the sealing system. It is the most suitable flow-wrapper when aesthetically good-looking packages with high-quality side gussets and thick wrapping materials are required;
- The FP 015 line for sandwiches. This horizontal pillow pack wrapper has a particular cantilevered frame with easy accessibility that helps sanitation, both for hygienic and maintenance reasons, guaranteeing full safety at work.

At the same time, the historical production carried out by Fiore 1827 was also implemented with the purchase of a vertical + multi-head packaging machine to improve

the type of packaging and achieve greater production efficiency.

With the selection of these tailor-made solutions, designed according to the production needs of Dolcezze Savini, the Tecno Pack group not only proves to be a leading manufacturer in the sector of packaging machines and systems but also confirms to be the ideal partner to integrate new technologies created as “tailor-made” solutions according to specific automation requirements.

The precious and fruitful collaboration between the Tecno Pack group and Dolcezze Savini represents the utmost expression of the most recent technological innovation combined with traditional working procedures for the production of a great variety of quality products with an authentic artisanal flavour. [🏠](#)



“ THE ECOLOGICAL TALENT OF PACKAGING ”

As consumers increasingly demand greater sustainability from the goods they purchase, companies respond by paying closer attention not only to the product itself, but also to its packaging. According to recent data from the Immagino Observatory, this shift in focus can be observed on product labels, with a subsequent impact on consumer behaviour.

The label serves as the first “physical” point of contact between companies and consumers, satisfying the latter’s need for thorough, accurate, and transparent information. As such, the label plays a crucial role in guiding consumer choices. With regard to sustainability, labels now provide more information than ever before about the product as a whole: from its raw materials to its possible uses, all the way to the environmental sustainability and recyclability of its package. Essentially, the packaging also talks about itself, assuming a new and influential role in consumers’ decision making processes. To put it simply, when consumers perceive an environmentally conscious approach, sustainability, recyclability, and overall green practices, they are more inclined to make a purchase. This significant aspect is something that companies are increasingly aware of.

The Key Words of Sustainable Labelling

According to a recent study by the Immagino GS1 Italy Observatory, consumers unquestionably prefer packaging that is attentive to sustainability, and certain key words are able to capture their attention more than others. The study (conducted twice yearly) is based on approximately 130,000 fast-moving consumer goods (FMCGs), comparing the products in the Immagino database as of June 2022 with those available for sale in large retail outlets as surveyed by NielsenIQ. The numbers are extremely telling: as of June 2022, the Immagino Observatory’s products generated over €41 billion in sell-out, equal to 82.3% of what was sold by hypermarkets and supermarkets in the overall FMCG market in Italy, with more than 133,000 products.



by Elisa Crotti





SUSTAINABLE Let's start with the general results: the "sustainability" claim has spread to a significant portion of the market (+15.3%), arriving at 4,024 products, and has exceeded €3 billion in sell-out, with an annual growth of 5.5%. For the food sector, the categories most involved in this trend are those of traditional biscuits, supermarket ice cream, and packaged pastries. Meanwhile, in the non-food sector, the Cleanright brand of dish and laundry detergents went into free fall, with sales dropping by 1.7%. The same trend could be seen for products with a sustainable cleaning certification, which experienced a 33.2% drop in sales over the 12-month period (laundry detergents, fabric softeners, and dish soaps). As for CO2 emissions, labels that claim a reduction have experienced an 11.9% increase in sales, a sign of the market's appreciation.

PLASTIC-FREE or LESS PLASTIC Plastic remains a hot issue for the market, thanks to European regulations that want to limit its use and the concern of consumers who are highly aware of both the issue and the need to stop its widespread use. Thus, the turnover of the 1,625 products sold in packaging that claims "less plastic" has grown by 9%, surpassing €1.2 billion and driven by a 19.4% increase in the selection of products and by a rise in cured meats, seed oils, and shelled nuts. This trend is also confirmed by the increased sale of products with compostable packaging. Here, however, the positive trend can be seen not only in sales, with a two-digit growth of 10.7%, but also in the increase in products, which has soared by 25.2%, thanks to the switch from plastic to compostable single-use tableware. A significant increase in turnover was also experienced by

products that advertise the use of Master-Bi resins, with more than €62 million in sell-out (+12.9%) and with single-use tableware still playing a pivotal role.

Recyclability as True Value

RECYCLABILITY Recyclability is the major trending topic of sustainable packaging. So much so that fully 40.2% of the products being monitored mention it on their label (as compared to 37.5% the previous year). In other words, two out of five monitored products feature an indication that can help consumers to correctly recycle the product's package. However, it must be noted that the absence of this information does not necessarily mean that the package is not recyclable. This is true primarily for glass, whose disposal is not mentioned, despite it being a 100% recyclable material.

Returning to the more than 52,000 products whose packaging indicates recyclability, in more than 85% of cases the package is completely (4.9%) or mostly (82.3%) recyclable, with a figure that has improved slightly as compared to the previous 12 months (+0.8%). During the same period, the number of products sold in non-recyclable packaging decreased, now down to 3.5% as compared to 3.8% in June 2021.

The sectors most involved in indicating the recyclability of their packaging as a true value are those from the freezer section (ice creams and frozen foods), followed by fresh produce. The number of non-food products with packaging that mentions recyclability is decidedly lower, but still growing: 39.5% in household care, 24.1% in personal care, and 23% in pet care. Beverages too are at the bottom of the list, with the same percentage as pet care, but this is justified by the significant presence of glass containers which, as mentioned earlier, often lack indications regarding recyclability.

RECYCLABLE MATERIALS What is the packaging of the more than 52,000 products monitored by Immagino, on which the recyclability is indicated, made of? The largest share is made up of packaging composed of a single material, accounting for 38.2% of the products (a reduction of 1.4% as compared to the previous year). The remaining 61.8% of items have packaging made up of multiple materials, in most cases two (35.1%) or three (19.8%).

When it comes to sustainable packaging, the consumer response is loud and clear. The sale of products that are entirely or mostly recyclable is undoubtedly greater, for both commercial brands and for the top twenty, followed by smaller producers. This is an unquestionable indication that consumers strongly approve of companies' green policies and that small choices can make a big difference.

PERSONALIZED SLEEVES AND SELF-ADHESIVE LABELS

Orograf S.r.l. has been in the SELF-ADHESIVE LABEL and SLEEVE business for 50 years and we are a well-established firm, both in Italy and internationally, hold ISO 9001:2015 certificate. We offer a high-quality and highly flexible all-round service, from graphic design through to final printing.

Our production facilities are highly innovative and use the most advanced manufacturing technologies.

We have a wide range of printing systems (letterpress, screen, HD flexo, digital, offset, hot relief, dry relief, perforation, glitter effect and on-foil pantone overprinting), and we can print on all types of material, adhesive and non-adhesive (laid, embossed, metallized paper, synthetic films, twin and booklet labels, reels and sheets), for any kind of end product. But what really distinguishes Orograf S.r.l. is that we can combine multiple printing systems on the same production line and therefore offer our customers unique and customized final products

tailored to their specific needs.

FOOD Labels

Regardless of whether they are applied on packaging or directly on products and fresh foods, labels for foodstuffs must be produced respecting a series of precautions dictated by the particular products on which they are to be applied. Above all they must be produced in compliance with consumer health protection laws. OROGRAF uses top-quality certified and guaranteed materials that meet these legal requirements and guarantee consumer protection. In addition to informing the consumer about the product, food labels can be used as warranty seals or open-and-close labels; they can also carry advertising, recipes, warnings, information about competitions, discounts, and so on.

As well as being customized with logos, colours and ingredients, food labels also need to carry traceability information, such as barcodes, progressive numbers, production and best before dates, batch codes and other variable data.





system. This is essential for products that consumers need to be able to open easily after purchase; this system also allows the sleeve to be removed from the container for recycling, once the product has been consumed.

MULTIPAGE,


TWIN LABEL and PEEL-OFF

Multipage, Twin and Peel-off labels are all great solutions when the available space is limited and needs to be optimised.

Multipage labels, as their name suggests, have a number of pages and they come in different sizes and formats: they can take the form of folded leaflets; detachable or with a

transparent resealable cover; or booklets (bound like a book).

Peel-off labels can have 2 layers (4 printable surfaces), 3/4/5 layers, or a booklet format; they can be printed in multiple colours, also internally, and there is the option of adding various other features, such as a tear-off system.

Twin labels are special self-adhesive “page-like” labels where a second layer (or page) can be applied on top of the first. This can be peeled back, read and repositioned. 

Orograf offers a wide range of plasticized materials, white and transparent, as well as standard finishes such as lamination and protective anti-UV coatings, hot foil printing and relief embossing.

Orograf offre una vasta gamma di materiali plastificati, sia bianchi che trasparenti, oltre a rifiniture standard come la laminazione e vernici UV protettive, stampe con lamina a caldo e goffrature a rilievo.

SLEEVES

A sleeve is a tubular label that shrinks when heated, perfectly fitting the product and giving it great visual appeal.

Our sleeves (produced in PET, PVC or PLA) can be printed in multiple colours, including metallized ones.

An important characteristic is the option of providing every sleeve with a “tear off”

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PERSPECTIVE

**PERSPECTIVE of NVC NETHERLANDS PACKAGING CENTRE on
Draft IENW/BSK-2022/263822 by Ms. VLWA Heijnen MSc.**



This PERSPECTIVE comprises three parts:

1. Introduction of association NVC and its position on packaging and environment
2. Analysis of packaging and environment over the period 2013-2022
3. Policy recommendations for the year 2023 and beyond



1. Introduction of NVC and its position on packaging and environment

Every second, the world packs some 320,000 products - and the world's population unpacks them later and in a different location. NVC was founded in 1953 and now unites over five hundred companies with an interest in continually improving packaging. The NVC membership includes retailers, packaging suppliers, machine suppliers, branded article manufacturers, pharmaceutical companies, companies in the chemical industry, packaging printers, co-packers, design agencies, recyclers, testing institutes, and so on.

NVC supports its member companies by providing them with up-to-date and reliable business information, by jointly carrying out innovation projects, by educating and training their employees in packaging and by 'matching' supply and demand in the market ('market support').

Specific to packaging and environment, these include the following activities:

- a. Inform member companies of global legislative and regulatory developments through the NVC Members-only Environment Regulations Guide MERGE
- b. The NVC Workshop Sustainable Innovation in Packaging (Live Online, so 100% interactive and participation possible from any location worldwide)
- c. The PUMA Project towards the end of packaging as an environmental problem (see the enclosed PUMA MANIFESTO and all background information at: www.nvc.nl/puma)
- d. Stimulating innovation in the sector by scouting new techniques and linking supply and demand through exhibitions, conferences and the NVC online Buyer's Guide

NVC works with a 'holistic' vision to improve the activity of packaging, obviously in the Netherlands but especially also on an international scale, given the structural developments in the actors involved in packaging, like the raw material suppliers, the packer-filler industry, the logistics and the retail.



NVC has played an active role in the development of European (CEN) standards in the field of packaging and packaging waste since 1994 resulting from the European Packaging and Packaging Waste Directive of December 1994. Thanks in part to NVC's initiative and its active role in the standards development itself, the world (ISO) standards in this area were published in 2012. Photo: the plenary meeting of the ISO working groups on 6 May 2011 in Atlanta USA at the Coca Cola headquarters.



The PUMA MANIFESTO has now been published in nine languages (Dutch, English, French, Italian, Korean, Japanese, Chinese, Spanish and Portuguese). The German-language edition will be published on Wednesday 3 May 2023 during the PUMA World Conference in Düsseldorf, Germany. From 4-10 May 2023, the world's largest packaging exhibition with more than 100,000 visitors will take place there: the interpack2023. NVC will promote the results of the PUMA World Conference there from a dedicated stand (ENB/03) at the Main Entrance North.

NVC is not a 'vertical' trade association, like, for example, FNLI (the umbrella organisation of the food industry in the Netherlands) or CBL (the trade association of Dutch supermarkets) or NRK (the federation of plastics and rubber manufacturers). As such, NVC's primary tasks are therefore not to 'lobby' the central government to promote specific industry interests. However, we do appreciate maintaining good contacts in this regard.

NVC communicates 'across the board' via NVC News and in the various social media. The NVC website attracts about **sixty thousand unique visitors** annually (about 60% of whom are based outside the Netherlands). Some **thirty thousand professionals** and organisations located worldwide follow NVC daily via social media, especially Twitter and LinkedIn.

NVC is worried about the state of affairs regarding packaging and the environment in the Netherlands and worldwide in 2022. The first European legislation on packaging and packaging waste dates back to December 1994(!) and we are now on the eve of the year 2023. In the meantime, a proposal for follow-up legislation was launched by the European Commission on 30 November 2022: the Packaging and Packaging Waste Regulation PPWR.

As a society and industry, we unfortunately have to conclude that the problems have clearly not been solved over the past 29 years. On the contrary, they seem to have actually gotten worse. Why is this? What can we learn from the past and how can we all do better in the future? How do we **end packaging as an environmental problem**? You can find this NVC basic position in our PERSPECTIVE on the Draft Decision of the Minister.

2. Analysis of packaging and environment over the period 2013-2022

The first significant European legislation on packaging and the environment dates from [December 1994: the European Packaging and Packaging Waste Directive](#). At that time, the Netherlands already had the Packaging Covenant, with the actor on the industry side towards the central government being the Stichting Verpakking en Milieu SVM. There came a Second Covenant in the Netherlands, with SVM.PACT (Project Administration Covenant Two) as the implementing organisation, and the European Directive was transposed into Dutch law in the year 1997.

With the Extended Producer Responsibility EPR comes a financing system for collection and recycling. After an 'interwar period' in which the central government started levying a Packaging Tax, [the Packaging Waste Fund Foundation StAV took office in the year 2013](#). In conjunction with - and paid for by - the StAV, several other foundations came into being, each of which started working in a subfield.

To be mentioned in this context is the [Knowledge Institute for Sustainable Packaging Stichting KIDV](#). This organisation has the Stichting StAV as its only client, with the mutual performance agreement being confidential. Over time, the pricing for specific materials (plastics) by Stichting StAV has been linked to whether or not they comply with Recyclechecks to be drawn up by KIDV. The operational relationship between Stichting StAV and Stichting KIDV is characterised by intensive personal ties (the former Stichting KIDV director is now Stichting StAV director).

To [address litter, the Stichting Nederland Schoon SNS](#) was set up. Its funding was originally linked to the moderated introduction of deposit fees on specific types of emptied packaging. April 2022, the Stichting StAV presented a plan to collect a whole range of 'deposit-fee sensitive' emptied packs (bottles, cans) through a large number of 'circular hub' collection sites. The plan did not include a public cost budget and went off the table soon after presentation.

Now, after a legal joust and a three-month delay, [deposit fees will be introduced across the full breadth of the relevant packaging spectrum on 1 April 2023](#). What are the costs going to be? The question also arises as to the usefulness of the continued existence of, or funding by, the Stichting StAV of the Stichting SNS.

Regarding the [Stichting Nedvang, a different corporate form is envisaged for the coming years](#): a Private Limited Company (BV). This raises the question of the (future) ownership structure, including the financial allocation of any profits generated by this BV.

StAV's internal organisation comes up for discussion in a report by ILT Inspectorate¹ which audited the accounts for the year 2019. The report contains damning conclusions

regarding the [limited financial, accounting robustness of the organisation](#), including the remarkable way the auditor approved the StAV financial statements for the year in question. The question is, whether these criticisms have now been addressed and durably covered by the Stichting StAV.

The substantiation of the rates used by the StAV Foundation is also unclear, with sudden rate changes (/increases) of up to +1000% occurring in recent years². There are concerns about the [unsatisfactory substantiation of the proposed rates](#) and about the possibility that the Stichting StAV, after having been granted the General Binding Declaration (AVV) by the Minister, has a free hand for five years to implement substantial and unexpected rate increases.

The accountability of the Stichting StAV and the policy structure it funds is also negatively discussed in a recent study by the University of Utrecht³. It analyses for various product categories, including packaging, the extent to which collection and recycling takes place in a transparent manner, with an unambiguous allocation of the various responsibilities. [The situation for the packaging sector is outlined as unfathomable](#).

Finally, there are questions about the data available to the Stichting StAV in the context of its levies. To [what extent are the personal and business data of the Dutch industry paying the fees shared](#) with the Stichting KIDV, the Stichting Nederland Schoon and Nedvang BV - and then through these entities with third parties engaged by them (consultancies, lawyers, self-employed professionals, and so on)?

All in all, major concerns have grown at NVC over the past decade about the effectiveness of the policy structure around the StAV Packaging Waste Fund Foundation as set up in the year 2013 and legitimised by the central government. The concerns focus on two questions:

- 1. What charges does the Stichting StAV want to charge, with what justification?**
- 2. What environmental performance will be achieved by the Stichting StAV with these targeted levies?**

Question 1 has increased in importance now that there is talk of a possible tripling of the envisaged levy per Dutch company, while this was denied in so many words by a representative of Stichting StAV in an NVC members' meeting in early 2022. The foundation's draft multi-year budget is insufficiently conclusive. The foundation does not commit to the level of tariffs for the coming years. What will be the costs (revenues) of the introduction of deposit fees as of 1 April 2023? The basic organisational system costs (at €12.5 million a year equivalent to a workforce of 100 FTEs and significantly increasing) also lack substantiation.

¹ www.ilent.nl/actueel/nieuws/2022/07/08/afvalfonds-behaalt-recyclenorm-voor-2019-maar-de-onderbouwing-schiet-tekort

² www.afvalfondsverpakkingen.nl/nl/tarieven (other metals)

³ studenttheses.uu.nl/handle/20.500.12932/518



Question 2 is almost even more important, especially now that the definition of 'recycling' is changing. A look at the Model in the PUMA MANIFESTO makes this clear. In fact, the 2013-2022 period looked at the amount of Collect-Control and not at the amount of 'newly usable, circular' materials actually created via a material recycling Backend process. Also, it is fundamentally flawed to exclude energy aspects from Collect-Control and Backend processing.

Essential for sustainable decision-making is the elaboration of the Circular Materials Plan (CMP1) promised by the Minister to be published by mid-February 2023, including an analysis of the desired material flows in the context of the Circular Economy of the Netherlands.

The NVC Survey The future of the packaging recycling in the Netherlands certainly will take into account the insights of the CMP1. The results of the NVC Survey will be presented on 5 April 2023.

Finally, an [analysis of the timeframe leading up to the Draft AVV decision](#) over the past twelve months. In the spring of 2022, we communicated our concerns to the Stichting StAV and on 11 May 2022 we met with the management. We had constructive discussions with various industries, the policy department of the Ministry, the Inspectorate and several Members of Parliament.

A total of over hundred NVC member companies actively participated in one or more of the NVC member meetings on the topic. NVC attended the parliamentary debates of the

relevant Lower House parliamentary committee and actively shared the information with NVC member companies and the industry as a whole.

The Draft Decision with an intended entry into force of 1 January 2023, was published on 7 November 2022. Given the deadline for the submission of PERSPECTIVE by interested parties like NVC (six weeks, i.e. until 19 December 2022 at the latest) and the intended entry into force of 1 January 2023, [the Minister has only a week and a half to make a decision](#). This is questionable for a dossier with an impact of at least €2 billion in costs for business and - in our view, much more importantly - with an obligation to future generations to now actually start making an end to packaging as an environmental problem in the Netherlands and worldwide.

Based on the above, one conclusion must unfortunately be that the policy structure in place since 2013 to manage packaging collection and recycling has serious shortcomings anno 2022. This entails significant risks for the Netherlands society, both in terms of costs in an economically turbulent period and in terms of (not) meeting environmental targets in a world where environmental issues rightly need to be addressed.

The decision-making on Draft Decision IENW/BSK-2022/263822 by Ms. VLWA Heijnen MSc., Minister for Infrastructure and Water Management, regarding a General Binding Declaration AVV of the levies by the StAV Waste Fund Foundation (Stichting Afvalfonds Verpakkingen) is a [decisive benchmark](#) in the context of the above.

3. Policy recommendations for the year 2023 and beyond

With regard to the Draft AVV Decree, we submit the following recommendations for the Minister's consideration. Of course, the Minister is free to adopt them entirely, partially or not at all. In all cases, we would appreciate receiving a motivation and will actively share them with our member companies and the sector as a whole.

1. [Postpone your final Decision until 1 July 2023.](#)
2. [Include in your final Decision the insights from your CMP1 \(to be published mid-February 2023\) and ideally the results of the NVC Survey the future of the packaging recycling in the Netherlands 2023-2027 \(results known 5 April 2023\).](#)
3. [As a condition for a final Decision, ask the Stichting StAV for an analysis addressing the years 2023-2027 of the budgeted costs in relation to the environmental results. This analysis should also include the impact of the various Stichting KIDV recycling checks on costs and environmental results to be achieved.](#)
4. [In your final Decision, require the Stichting StAV to pre-determine rates for all years covered by the AVV.](#)
5. [As part of your final Decision, request disclosure of the performance agreement between Stichting StAV and Stichting KIDV including the annual reviews for the past years 2013-2022.](#)
6. [Engage Parliament prior to your final Decision, especially in the run-up to the public meeting of the Parliamentary Committee on IenW in the spring of 2023.](#)



Gouda, 14 December 2022
NVC NETHERLANDS PACKAGING CENTRE

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Sharing the future in packaging
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“FOOD LABELING: BETWEEN REGULATIONS AND TECHNOLOGICAL INNOVATIONS.”

Food labeling is of fundamental importance to ensure the safety and transparency of products. Companies are using technologies such as blockchain, AI, QR codes, and sensors to improve product traceability and quality.

Food labeling has become a central issue in contemporary society. The quality of food and food safety are distinctive elements of European culture. Food labeling allows consumers to have clear and transparent information about the products they purchase, as well as ensuring compliance with current regulations.

In this article, we will examine the main rules governing food labeling and the technological innovations available to companies to improve production and control processes.

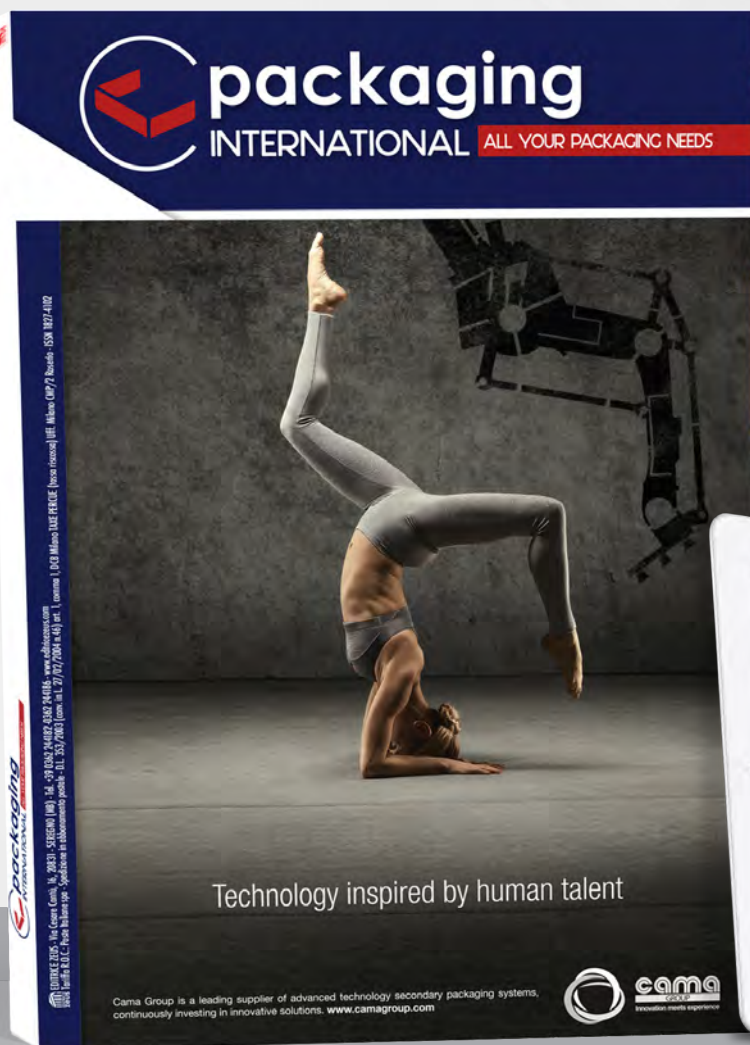


by [Walter Konrad](#)

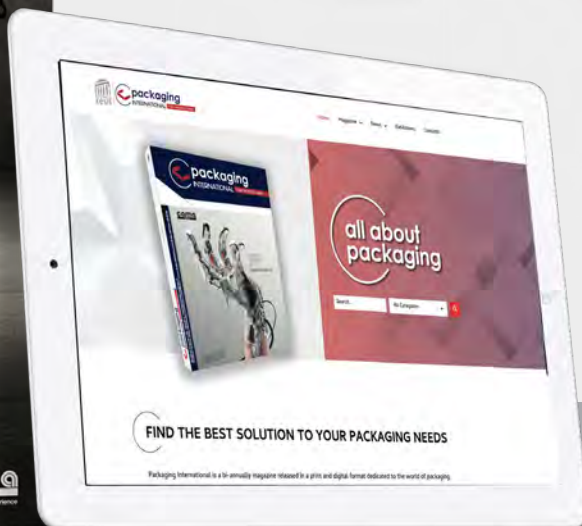


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The regulatory framework

The regulations on food labeling are based on Regulation (EU) No. 1169/2011 of the European Parliament and of the Council, known as FIC (Food Information to Consumers). This regulation establishes the mandatory information to be included on the label, such as the product name, list of ingredients, expiration date, storage conditions, allergen indication, and nutrition table.

The health ministries of the various countries are the entities responsible for controlling and monitoring compliance with regulations on food labeling, including the prohibition of unfair and misleading commercial practices.

Technological innovations in the food industry

Food companies are using new technologies to improve product traceability and ensure compliance with current regulations. Among these, we find:

- 1- Blockchain: This technology allows for the creation of a secure and unalterable digital record of transactions along the production chain. In this way, companies can guarantee the origin and quality of the ingredients used, offering consumers greater transparency.
- 2- Artificial intelligence (AI) and machine learning: The use of advanced algorithms and automatic learning systems allows for real-time analysis and monitoring of product quality, and the detection of any anomalies or irregularities in the labels.
- 3- Smart labels and QR codes: The adoption of interactive labels and QR codes allows consumers to access detailed information about the product and its production chain simply by using a smartphone.

These solutions offer a more complete and personalized experience for the customer, who can make more informed purchasing decisions.

- 4- Internet of Things (IoT) and sensors: The use of connected devices and advanced sensors along the production chain allows for the collection and real-time monitoring of data, improving resource management and reducing waste. For example, sensors can be used to monitor temperature during the transport and storage of products, thus ensuring the safety and quality of food.
- 5- 3D printers for labels: 3D printing allows for custom labels for each product, with greater flexibility and a lower incidence of errors. This technology can be particularly useful for companies that produce food in small batches or with specific characteristics, such as organic or gluten-free products.
- 6- Digital platforms and management software: The use of digital platforms and specific software for label management simplifies and speeds up the process of creating and revising labels. These tools can help companies comply with current regulations and prevent any penalties for non-compliant labels.

In conclusion, food labeling is a topic of great relevance, both from a regulatory and technological point of view. Companies in the industry must comply with the provisions in force, providing clear and complete information to consumers. At the same time, the adoption of innovative technological solutions can contribute to improving the quality, safety, and traceability of food products, as well as ensuring transparency and customer trust.



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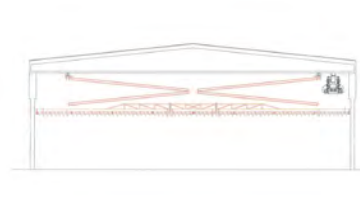
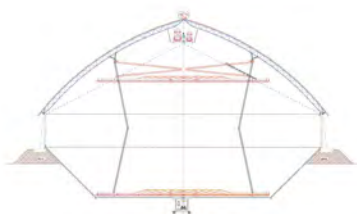


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BORGHI SRL: CEREAL STOCKING AND TRANSFORMATION PLANTS



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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

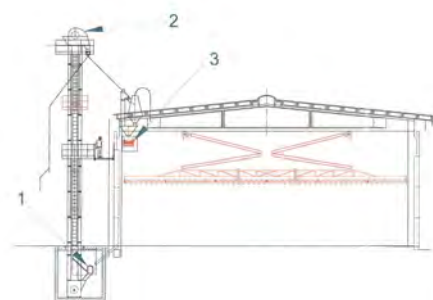
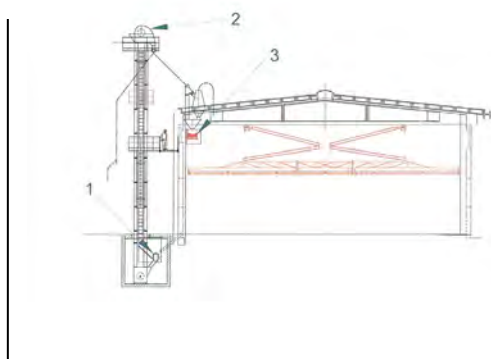
Consisting of flat warehouses, today they represent the most economical system (ratio between cost and stored tons) for cereal storage and conservation (energy and labor necessary for the plant optimal functioning). Generally made of metal

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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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





EQUIPMENT AND LINES FOR THE INTEGRATED PROCESSING OF FRUIT AND VEGETABLES

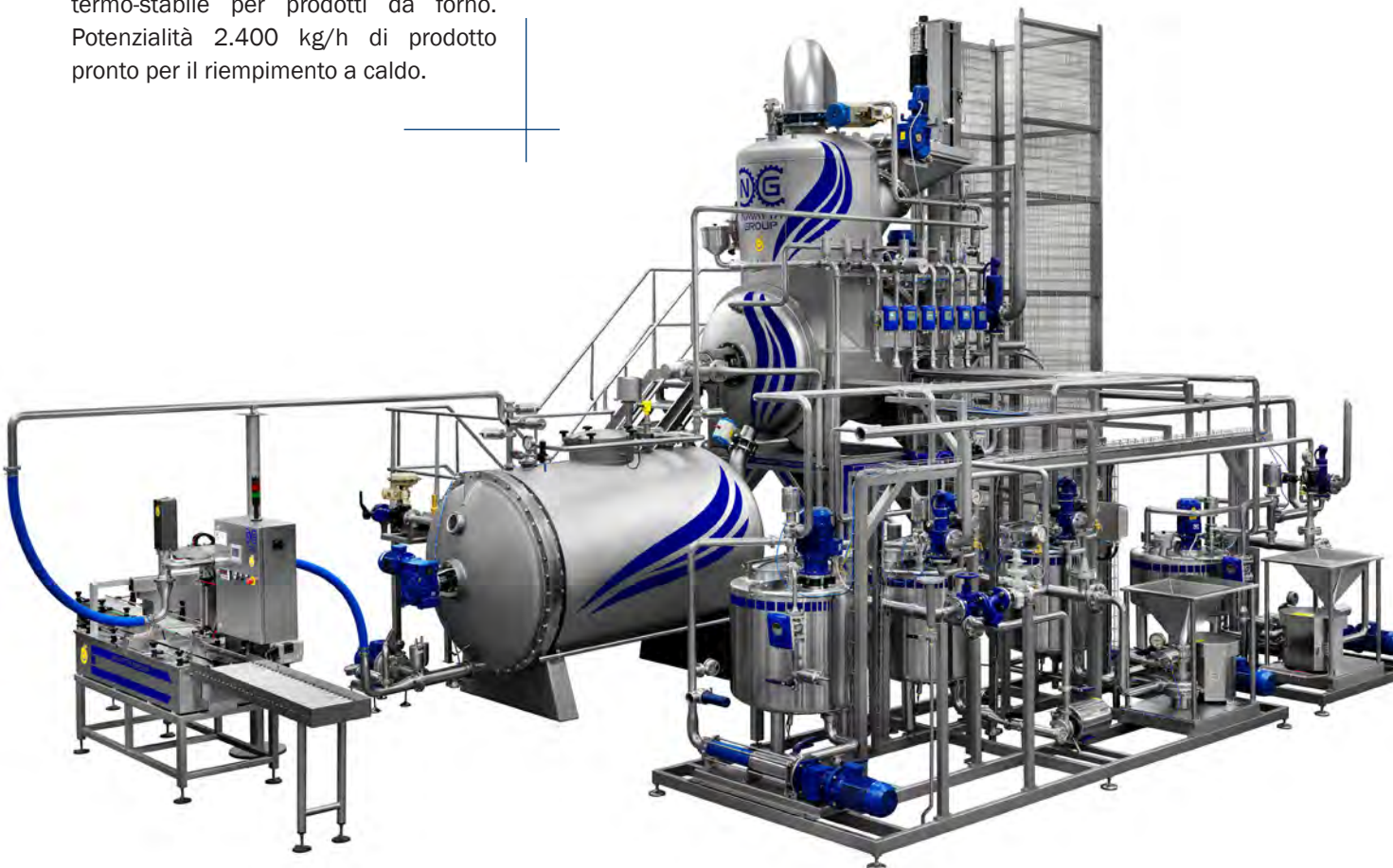
The company Navatta, founded by Mr. Giuseppe Navatta in 1983, produces and installs fruit and vegetable processing lines and boasts references across the globe.

NAVATTA, THE GLOBAL SUPPLIER OF INTEGRATED FRUIT & VEGETABLES PROCESSING EQUIPMENT AND LINES, PROVIDING WELL PROVEN AND INNOVATIVE SOLUTIONS FOR A FULL RANGE OF PLANTS also thanks to the

numerous companies' acquisitions over the years, such as Dall'Argine e Ghiretti in 2001, a 40-year-old company world famous for rotary can pasteurizers and tomato pulping lines; Mova, in 2010, with extensive experience in bins handling, bins and drums emptying, palletizers and de-palletizers, washing systems; Metro International, in 2012, leader in fruit and vegetables processing, boasting international patents for juice and puree extraction, concentration plants and thermal treatment; Ghizzoni

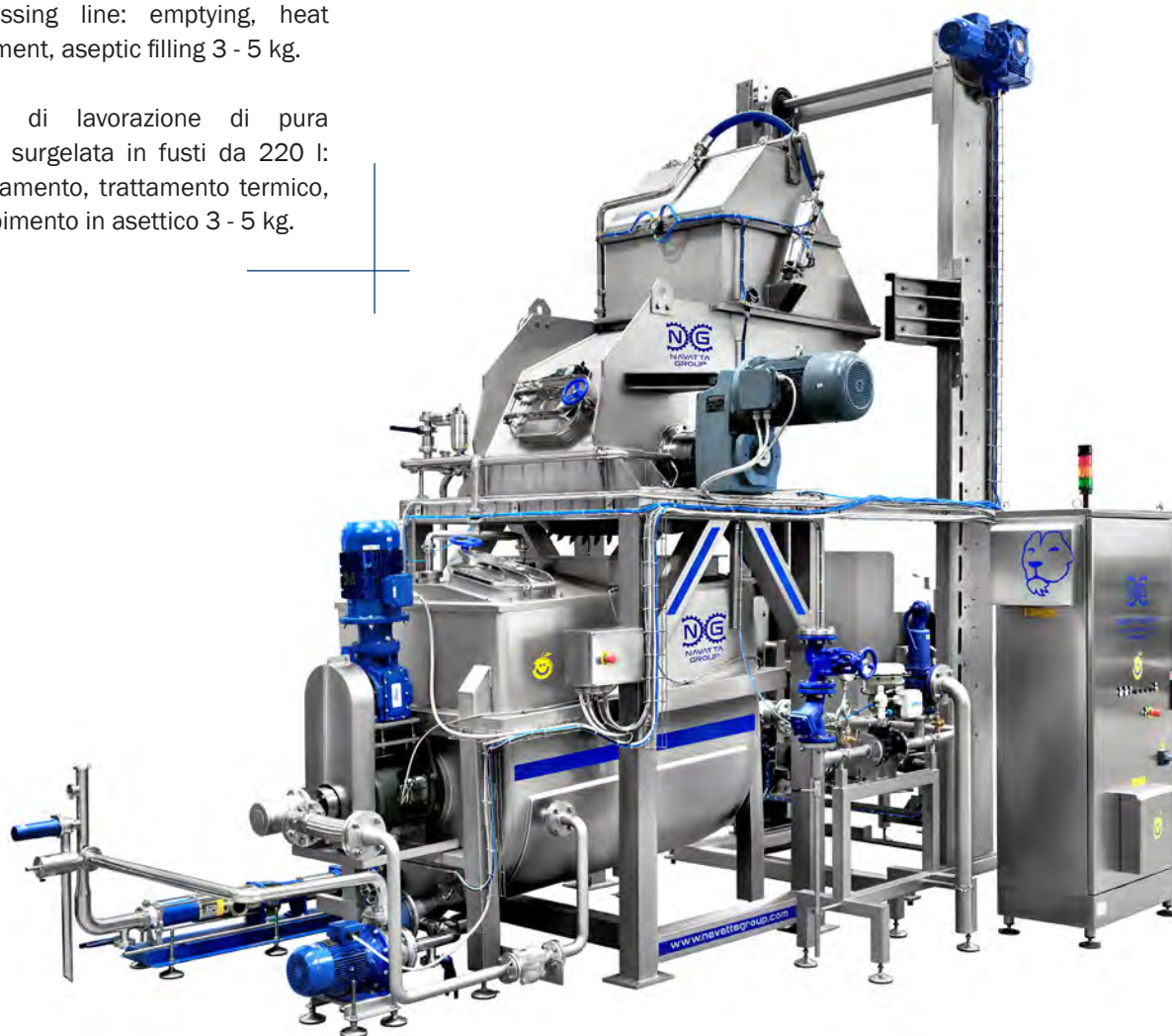
Line to produce thermostable jams for bakery products. Working capacity: up to 2.400 kg/h product ready for hot filling.

Linea per la produzione di marmellata termo-stabile per prodotti da forno. Potenzialità 2.400 kg/h di prodotto pronto per il riempimento a caldo.



Bag-in-drums 220 l frozen fruit pure processing line: emptying, heat treatment, aseptic filling 3 - 5 kg.

Linea di lavorazione di pura frutta surgelata in fusti da 220 l: svuotamento, trattamento termico, riempimento in asettico 3 - 5 kg.



Ettore, in 2012, specialized in special batch plants for ketchup, sauces and jams.

MANUFACTURING RANGE

NAVATTA GROUP manufactures and commissions Processing Lines, Systems, Equipment for Fruit, Tomato, Vegetables for:

- peeled / diced / crushed tomatoes, tomato sauces and purees, tomato paste, all filled into any kind of package or in aseptic;
- diced, puree, juices (single strength or concentrated) from Mediterranean / tropical fruit, all filled into any kind of package or in aseptic;
- Fruit crushing lines from IQF, frozen blocks and frozen drums
- High yield PATENTED fruit puree cold extraction, fruit purees / juices equalized in aseptic.
- Wide range of evaporators to produce tomato paste Mediterranean and tropical fruit concentrate.
- Aseptic sterilizers
- Aseptic fillers for spout bags/ spout-less Bag-in-Box 3 - 20 liters, Bag-in-Drum 220 liters, Bin-in-Box / IBCs 1.000 - 1.500 liters;
- Piston Fillers
- "all-in-one" pasteurizer / cooler spirals



NAVATTA GROUP
Food Processing S.r.l.



Single head aseptic filler "Webzero" for web small bags 3-5-10-20 liters - automatic loading system - no operator needed - patented system. Semi-automatic filling of 220 bags in drum. Aseptic tank and sterilizer. riempitrice aseptica a testa singola "Webzero" per riempimento di sacchi piccoli da 3-5-10-20 litri - sistema di caricamento automatico - nessun operatore necessario - sistema brevettato. Riempimento semi-automatico di sacchi in fusto da 220 l. Tank aseptico e sterilizzatore.

- Formulated products productions (jam, ketchup, sauces, drinks) starting from components unloading to dosing, mixing, mechanical / thermal stabilizing, to filling into any kind of package or into aseptic;
- Processing pilot plants;
- Vegetable processing as receiving, rehydration, cooking, grilling

Visit:

www.navattagroup.com

Navatta Group's headquarter and the two production units are located in Pilastro di Langhirano, Parma, with a total production area of 10,000 square meters.

A new area of 10,000 square meters has recently been purchased and is ready for the third processing unit to be built.

VISION: Passion is the factor that drives us to higher targets, in terms of technology, products and services.

MISSION: To constantly increase Customers' satisfaction and fidelity. 🏢

Navatta, the global supplier of integrated fruit&vegetables processing equipment and lines, providing well proven and innovative solutions for a full range of plants.



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.





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 

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



Tropical Food Machinery is an international company with two headquarters in Italy and Brazil, leading in the global field of fruit processing systems. The company currently has liaison offices in India, Costa Rica and the Asia-Pacific and West African regions.

Thanks to its decades know-how, the Company offers complete production plants for the industrial process of tropical fruit, producing finished products such as natural juices, concentrated juices, nectars, purée, fruit in syrup, sauces or jams.

The company' success over the years is certainly due to the pineapple processing plants: Tropical Food Machinery can boast dozens of active plants all over the world, with

machines entirely designed around the pineapple juice extraction. Every plant includes the entire product processing, from the fruit receiving to the aseptic filling, and can process up to 20 tons of fresh fruit per hour.

Tropical Food Machinery portfolio also includes the development of multifruit processing lines.

These systems combine different extraction machines, each one dedicated to the processing of a specific type of fruit – whether with thick skin like pineapple, or stone fruit as mango or even fruit with seeds like maracuja.

In this way, it is possible to use a single multifruit line for the processing

of different types of fruit according to the harvesting season, guaranteeing a continuous productivity, at high efficiency and with a very high level of quality in the final products.

Every production plant is designed and built in-house, tested before its delivery, enabling a complete control over quality and production data.

Every line is designed to satisfy a wide range of multipurpose technological solutions: mobile small-size plants can be used by producers or farmers in decentralized areas, reducing waste, diminishing management costs, and generating local economy; large-scale plants can meet high production demands, reducing waste, optimizing energy



ARTEMIDE EXTRACTOR WITH ROTATING BEATERS

FOR STONE FRUIT OR FRUIT WITH SEEDS



EXTRACTION
YIELD IMPROVED



MODULAR
MACHINE



NEW
BEATERS
DESIGN



WASTE
REDUCTION



TROPICALFOOD
MACHINERY

Tropical Food Machinery Srl

Via Stradivari, 17 - 43011 Busseto
Parma - Italy

www.tropicalfood.net



consumption and expanding the producers' market.

As Stefano Concari, the company general manager, said: "This is what drives our company: working closely with our Customers to offer them the most suitable solutions for each project, improving our technologies".

In R&D, the most important progress in recent years has been the development of Cerere 6000, an automatic banana peeling system.

Cerere 6000 can guarantee a very precise and complete automatic fruit peeling and a safe pulp processing, in inert atmosphere with antioxidant treatment.

The system can peel about 35,000 bananas per hour with a capacity of 6 tons of fresh fruit per hour and with a high-yield of extracted pulp.

For this reason, in 2021 the company received a prestigious prize in technological innovation, being awarded the International FoodTec Award by the Deutsche Landwirtschafts-Gesellschaft, a German agricultural company, and its specialized partners.





CERERE 6000 - Automatic Banana Peeler

Another important achievement of Tropical Food Machinery is the development of Aroma Recovery System, an innovative and compact automatic machine that can be integrated into new or existing production plants without juice waste.

The system can extract and concentrate natural aromas and essences that would, otherwise, be lost in the juice extraction process – is a fact that any fresh product subject to an industrial processing risks losing some of its precious organoleptic properties, and the aroma among them).

The advantages of recovering aromas are many: the extracted aromas can be reintroduced into the product during the final processing stages, improving its characteristics, or it can be sold separately with an exceptionally fast return on investment. Indeed, high-quality natural flavours can command a considerable price for use markets such as food, beverage and cosmetics. 🏠

www.tropicalfood.net



Aroma Recovery System

TROPICALFOOD
MACHINERY



ट्रॉपिकल फूड मशीनरी मोटी त्वचा वाले फलों, स्टोन फ्रूट या बीज वाले फलों की प्रसंस्करण के लिए पूर्ण मल्टीफ्रूट प्लांट्स प्रदान करती है।

HOMOGENIZATION TECHNOLOGY FOR A BETTER FUTURE

Demographic and climate changes are forcing a profound rethinking of industry priorities, accelerating the introduction of sustainable products such as plant-based alternatives to milk and meat (so-called “new food”) or alternative packaging to plastic.

GEA Homogenizer has been able to read these trends and has risen to the challenge: with 75 years of experience and a state-of-the-art Technology Center, it has developed specific solutions for these new applications, proving consistent with the group’s purpose of “Engineering for a better world.”

Foods and beverages processed with homogenizers are part of our daily lives and can have a major impact on the quality of life and sustainability of our habits. Dairy and plant-based substitutes, sauces, beverages, and nutraceuticals are products that have also evolved as a result of improved homogenization process.

Benefits of the homogenization process

The benefits of high-pressure homogenization are already known in the food & beverage industry for the reduction of particles in the fluid to sizes even below the nanometer. Homogenization technology therefore makes it possible to create a stable emulsion over time that improves the organoleptic characteristics of the product: shelf-life, viscosity, taste and color.

The use of high pressure and a specific design of the homogenizing valve, engineered according to the product to be processed, make it possible to decrease the size of product particles to the required degree of micronization and to homogenize at the lowest possible pressure, allowing significant cost and energy savings.

“We have recently launched a new range of homogenizing valves capable of reducing energy consumption by



New trends in the food industry today are also possible thanks to the contribution of homogenization technology that supports new applications and sustainable processes.





30%” confirms Domenico Gambarelli, Managing Director of GEA Homogenizer. “Our strategy is based on the desire to accompany customers at every stage of business ‘scale up’ and development of their products, thanks to a machine portfolio ranging from laboratory to industrial production.”

Always by the customers’ side

The Process Technology Center, renovated and refurbished in November 2019 and based in Parma near the production site, is a unique resource for customers, who can evaluate the performance of the homogenization process directly in the field with samples of their product.

Highly qualified staff can support customers in the development of new products and establish the most efficient process conditions so as to ensure scalability of the result even on industrial flow rates.

The reliability and quality of GEA products is known worldwide: come and find out all the details at gea.com/homogenizers.

www.gea.com/homogenizers



**Engineering
for a better
world.**



जीईए होमोजेनाइजर्स उत्पादन साइट – पारमा 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 पारमा 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।

CIRCULAR ECONOMY: INDUSTRY AND ENVIRONMENT IN CO-EXISTENCE

“Pastazzo” promotion for an eco-friendly business

From the very first steps in ORION Engineering company, we decided that one of the most important points to be focused on in our projects would have been the eco-sustainability of the processes in which our plants are involved. Today, as then, we pursue this philosophy to pass on to future generations a world that places man at the centre of an ethical and eco-sustainable business.

The first achievements, obtained from these analyses, highlighted the opportunity to undertake a path to further enhance a by-product linked to the citrus fruit chain: the “pastazzo”!

The study we have been carrying out for some time is allowing us to re-engineer its enhancement. The combination of technologies and ancient traditions permit to reuse these production wastes as new raw material. The analysis opens new business opportunities for the protagonists of the supply chain, focusing on reducing industrial production costs and at the same time allowing the surrounding environment to be preserved. The citrus fruit pulp, as known, is a by-product of the

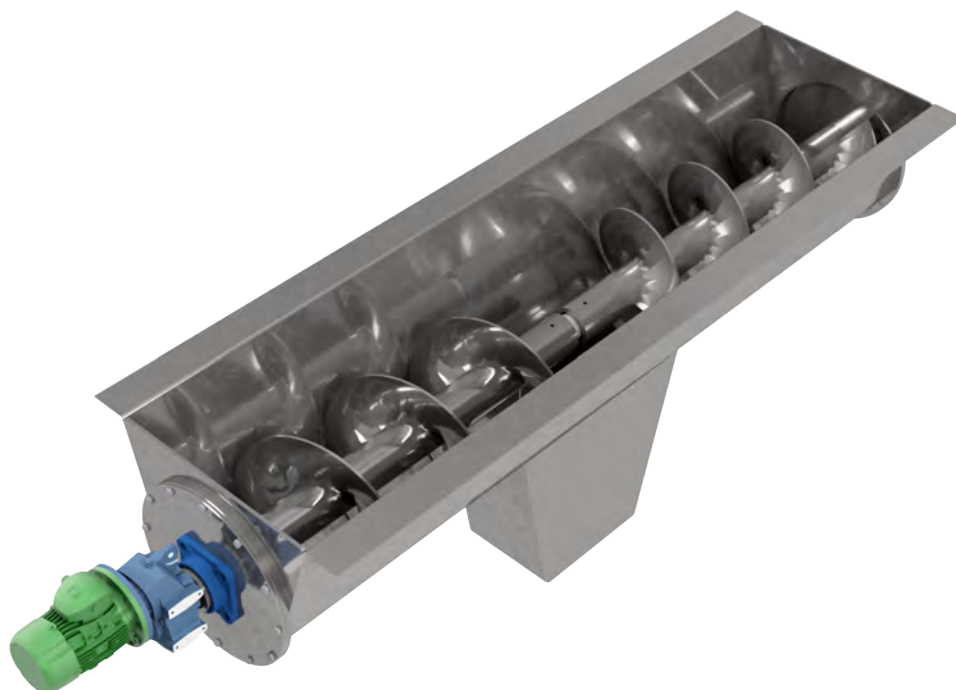
food processing industry consisting of lemons and oranges waste subjected to the extraction of juice and essential oils. From a chemical-physical point of view, the “pastazzo” is made up of residues of peels ($60 \div 75\%$), pulp ($30 \div 35\%$) and seeds (on average $0 \div 9\%$ depending on the quality of oranges and lemons undergoing transformation).

Depending on the type of citrus fruit and processing, the production of fresh “pastazzo” varies from 49% to 69% by weight of the fruit subject to the transformation process. Sometimes the “pastazzo” also contains process water absorbed during the production phases.

As a pure indication, we can highlight the different processing products and by-products from the transformation of 10 tons of citrus fruits from which to obtain:

• **4.930 [kg] of products derived from the 1° transformation**

- 4.200 [kg] First pressing juice;
- 700 [kg] Second pressing juice;
- 30 [kg] essential oil;



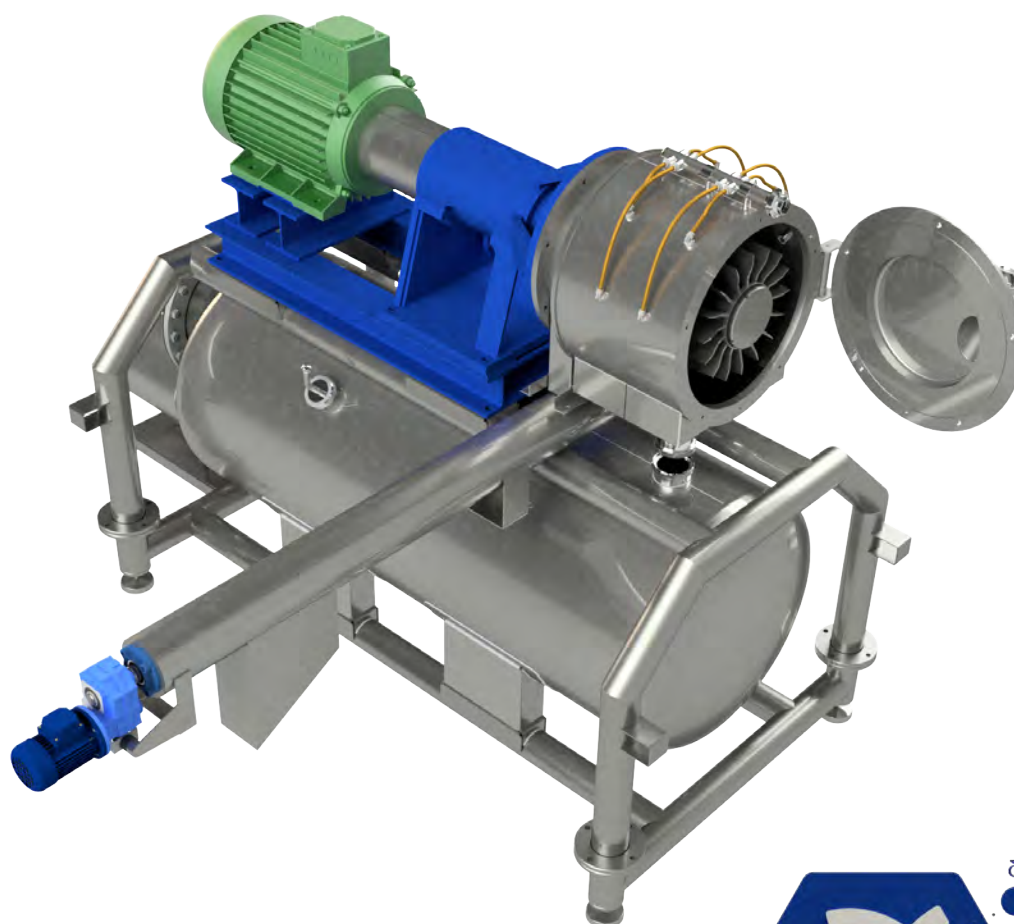
UNIFORM, PARTICLE BY PARTICLE.

Discover the homogenization
process for food applications.

A complete range of high pressure homogenizers can be customized for you, in order to ensure the production of excellent and safe food products.

Enhanced physical stability, increased shelf-life and viscosity, better mouth-taste are just few of the benefits that this process can add to your products.





• **5000 [kg] of fresh zest “Pastazzo”**

- 265 [kg] Peels for the extraction of Pectin;
- o 315 [kg] Peel for zootechnical use;

• **9330 [l] di Liquid residues**

- 125 [kg] of Bio-Alcohol;
- 9205 [l] of residues with C.O.D. equal to 18.500 mg/l for Biogas production;

The citrus fruit pulp can be used in different ways, some of the best known concerning the organic fertilization of the land, the use in animal husbandry and the extraction of pectin: a thickening polysaccharide naturally present in fruit and widely used in the production of jams.

Our mission as ORION Engineering company is to make the reuse of this resource usable, through our technology under development, to give the opportunity not only to large industrial processing plants but to many others.

The synergy of our growers and all the players involved in this supply chain is one of the keys of success of the process. Our country, with the notification to the European Commission of 13 February 2019, highlights the need for and importance of the use of this resource, asking for the regulation for production, marketing and

use of “pastazzo” as a by-product of citrus processing for its agricultural and zootechnical use.

The various scientific research which are studying and proposing the use of “pastazzo” as an alternative for human nutrition provide further value to our recovery project. The idea is to partially replace food fats such as palm oil (used in various baked goods’ preparation) with a dried fiber extracted from all the residues of citrus fruits.

From the grinding and drying of the fiber, some flour is obtained that has the characteristics of dietary fiber and great water absorption power, for a “sponge effect” that would allow this flour to at least partially replace the dietary fats present in snacks and other bakery products.

Do not hesitate to contact us to receive further information on the technology under investigation and for its application in plants of medium production capacity. 🏢

www.orion-eng.it



PND SRL, THE ORIGINAL ONE: BEWARE OF CLUMSY ATTEMPTS OF IMITATION!

Specialisation, customer care, continuous innovation, **custom technology** and an extensive knowledge of **international markets** are just some of the features that have enabled **PND srl** to be among the leading companies in the world in manufacturing and sale of **fruit processing machinery**.

This **experience** has, in **22 years of activity**, allowed **PND** to bring **continuous improvements to the machinery** in its extensive catalogue, which includes advanced solutions for processing of **pears, apples, kiwis, oranges, grapefruits, lemons, pineapples, lemons, mangoes**,

The satisfaction of seeing that companies in our sector with many years of experience use images and videos of our creations covered by copyright and try in vain to replicate our technological capacity is priceless!
For everything else there is PND, the real one...
BEWARE OF CLUMSY ATTEMPTS OF IMITATION!

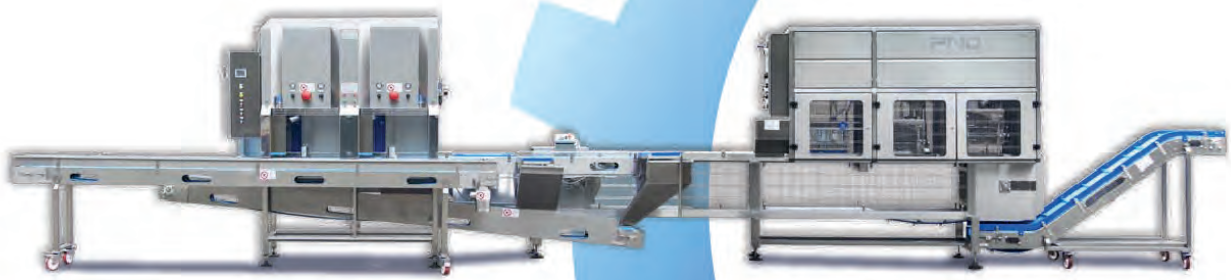
Mango  **PEELING**



PEELING MACHINE

MOD. PL6M

ITALIAN PRODUCT 



Pineapple and Melon



COMPLETE
SEMI-AUTOMATIC LINE

MOD. PL2D | SCMA



PEELING



FINGERS



CHUNKS

ITALIAN PRODUCT  





strawberries and peaches, with all possible variations in order to meet the needs of companies processing fresh products for **Fruit Fresh Cut, canning industry** (jam and canned peaches in syrup), and **dried** and **frozen** sectors.

One example is the **PL6M, a semi-automatic peeler** with six processing heads, initially dedicated to peeling **mango: nowadays it is also able to peel kiwi**.

The advantages of PL6M, that is: adjusting the peel thickness, managing the production speed and the rotation of the fruit through an inverter, associated with the possibility of **processing fruits of different calibre without any adjustment and with fast maintenance**, are now available for both mango and kiwi.

When choosing one of the **18 semi-automatic machines, manual or automatic ones** in the PND catalogue, you are choosing a standard machine that can be tailored to your needs.



सेब, नाशपाती, कीवी, आम, आड़ू, खरबूजे, अनानास जैसे फल प्रसंस्करण मशीनों के निर्माण में पीएनडी कंपनी अग्रणी है।



At the website **www.pndsrl.it**, in addition to viewing the product catalogue, it is also possible to consult the calendar of **international trade fairs**. 🏠
www.pndsrl.it



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

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

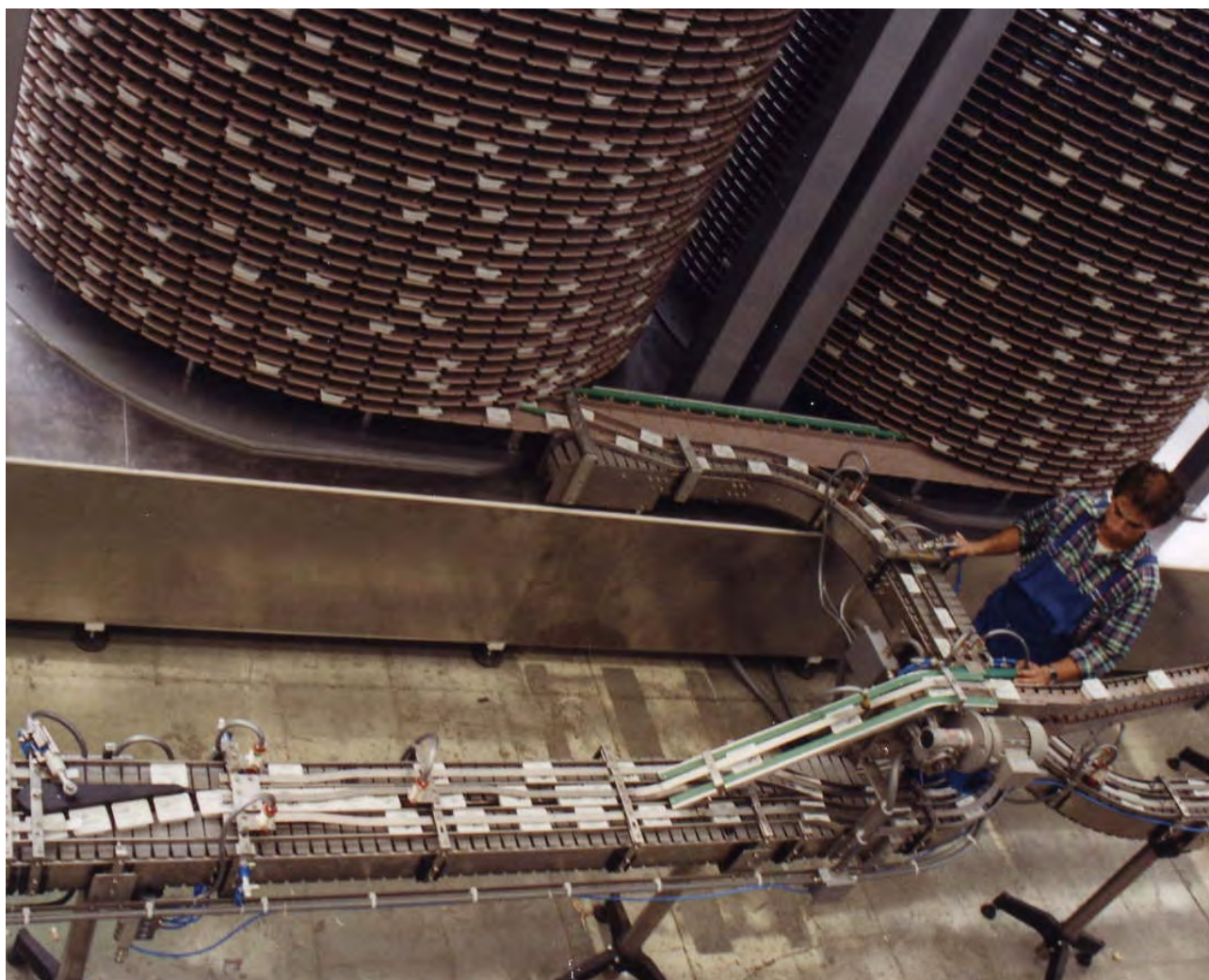


The ASCO Series 290 is a pressure-operated, direct-acting, angle seat-body valve built for demanding applications such as fermentation



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-

ral 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. 🏢

www.mhmaterialhandling.com



“ ITALIAN ORGANIC FOOD IN 2023 ”

The Covid- 19 pandemic certainly had a negative impact on the Italian organic food industry. However, this sector has begun to recover as consumers resume demand for delicious perishables. In the first six months of 2022, profits in Italian food exports rose by 16% compared to the previous years.

Germany, France, and Benelux are the biggest areas for importing Italian food products. However, there is also a thriving B2B industry within Italy itself. In 2023, there are several trends for food production and distribution to be aware of. Here are some of them.

Food Traceability

When a restaurant purchases food products from a supplier, they want traceability for all sections of the supply chain. This is especially true for meat such as poultry, as animal welfare is a major concern. Organic and ethically

sourced meat will likely be a key focus for the industry in 2023. Italy provides a large amount of fish to both local and international businesses.

Companies that are transparent about their practices will seem more attractive.



by Our Editorial Team



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Technological Advancements

The rise of eCommerce has transformed the Italian organic food industry. It has expanded the different types of products available to order. B2B logistics can become more efficient in the coming year as new forms of technology are embraced. On the other hand, classic staples such as pasta and vegetables will still be ordered wholesale by customers all over the world. Technology could even be used in the production of the food itself. For example, olive oil companies may use new hardware and software to increase their yield on a factory scale without undermining their organic status.

Fast Delivery

Advanced GPS apps and delivery drones allow perishable Italian foodstuffs to reach the customer in a shorter amount of time. This means that in 2023, restaurants can get fresh products and serve them on the same day. Pizza continues to be an extremely popular form of Italian food. Live yeast is required to make the dough. In the past, organic yeast would have died before reaching the customer. As a result, people resorted to canned products instead.

Demand for Shelf Life

Meanwhile, 2022 saw a marked increase in the demand for food with an enhanced shelf life. This poses an issue for suppliers of organic products. Firms will need to find ways to make items last longer without resorting to the use of additives.



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AN APPROACH TO INNOVATIVE CROSS-FLOW FILTRATION WITH VLS TECHNOLOGIES

The markets of wine, beer, spirits, juices and soft drinks are constantly evolving, and the technological solutions adopted for the filtration of liquids must keep up with innovation and growth.

VLS Technologies represents worldwide a single reference point for the client for both the aspect of filtration and more complex needs that involve the whole process of liquid treatment: that is made possible by the production plant in San Zenone degli Ezzelini in the Province of Treviso, northeast Italy, as well as by an established worldwide network of agents, authorized reselling and assistance.

In addition to traditional applications, as sheet filters or pressure leaf filters, the focus of VLS Technologies is the development of innovative solutions as cross-flow filtration systems and reverse osmosis.

Innovative technologies guarantee a number of advantages. For example in cross-flow filtration the liquid is pushed by means of pressure through the particular pores of a membrane: thanks to this system the clients are able to improve the obtained quantity of product, decreasing energy consumption and production costs, for example avoiding the usage of clarifiers and adjuvants.

Among technologies based on cross-flow filtration, the most valued are Unico and Lees-stop.





VLS Group



Unico filter is a solution designed for small/medium manufacturers that need to filter their products (wines and lees) with a single solution, obtaining a filtered product of excellent quality with a turbidity below 1 NTU. That is why VLS Technologies has created Unico filtration system: thanks to our filter it becomes possible getting a good filtration of the product and reducing the microbiological flora; all of this by saving all the organoleptic characteristics of the product.

The filtering media can stand repeated regenerations with warm water and detergents: this means a longer lifespan.

Unico has recently won the “Innovation Challenge Lucio Mastroberardino” at SIMEI Drinktec 2017.

Lees-stop, winner of the New Technology Award at SIMEI 2015, is a solution meant for filtering products with high content in solids that replaces the traditional polymeric membranes of the cross flow filters with sinterized stainless steel membranes. Thanks to several tests, we have verified that this kind of material perfectly fits the cross

flow filtration of “difficult” products with about 70% of content in solids. VLS Technologies, thanks to its 35-year experience in the market, can guarantee a dynamic and flexible approach, realizing long-term partnerships with both medium and small production companies as well as with major brands worldwide. 🏢

www.vlstechologies.it



The Premier PROCESSING & PACKAGING Event for Vietnam and beyond



After the success of ProPak Vietnam in 2022, there are many positive feedbacks on business opportunities generated during the show dates. The 15th edition attracted 10,720 trade visitors to the event to do face-to-face business and provided countless product demonstrations to engineering community. Coming back **Saigon Exhibition & Convention Center (SECC), District 7, Ho Chi Minh City from 8th – 10th November 2023**, ProPak Vietnam 2023 will continually serve the packaging & processing industry in Vietnam and beyond. This is the dedicated place for B2B connect activities, product & technology showcase, industry sharing sessions for enterprises who are working in food, beverage, pharmaceutical, cosmetics, consumer goods and many other related sectors. Secure your participation in the 16th edition of ProPak Vietnam to obtain a chance for real business opportunities you must invest in. ProPak Vietnam 2023 will bring an international-standard event to Vietnam and surrounding countries with significant features:



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30+

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11.000+

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**RESERVE YOUR SPACE TO BE A PIONEER IN
THE PACKAGING & PROCESSING INDUSTRY IN VIETNAM!**

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.

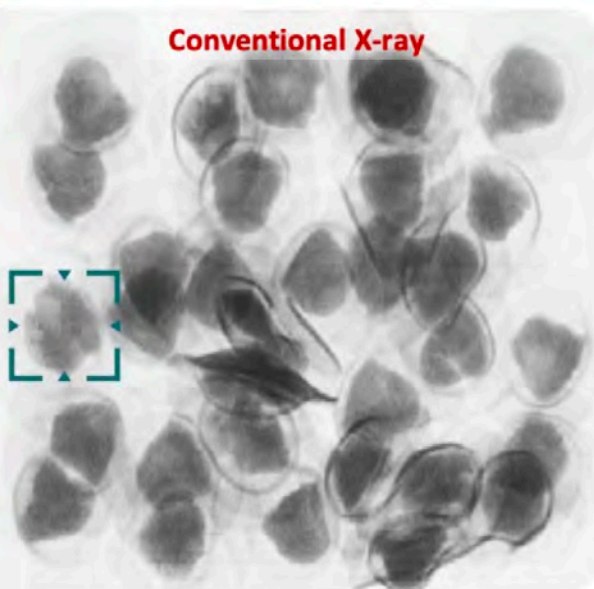
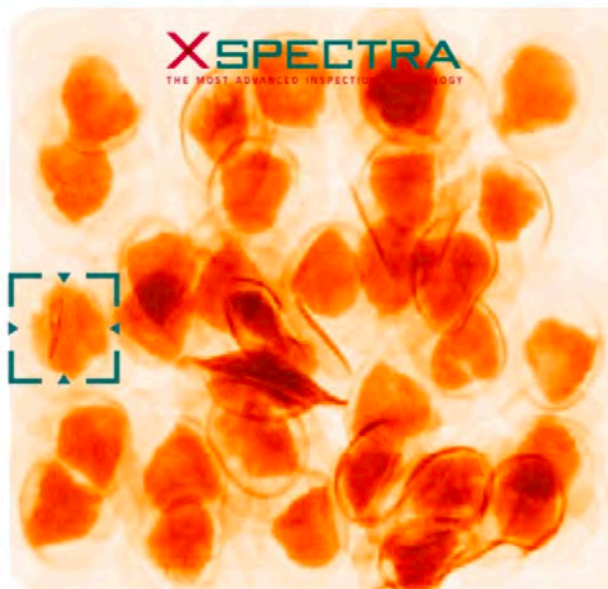
Xnext® has developed the heart of its x-ray multi-energy system, XSpectra®, to further increase the quality of supply chain control.

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





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

EXPERTS IN CREATIVITY, INNOVATION & SUSTAINABILITY



A quality designed to last. This is Lawer's mission statement, a Biella based company, internationally recognized for the excellence of powders and liquids dispensing systems. This excellence begins with a preliminary analysis phase, to the equipment commissioning, to ensure safe and automated systems, operated by a high-class software which is able to adapt itself to the manufacturing companies' changing needs. Quality is also the ability to provide the most efficient service and maintenance, being always on time and close to its customers thanks to a worldwide presence.

Since the beginning Lawer has always implemented the strategic decision to invest on people, research and new technologies. Thanks to the analysis and development of the technical department the company shows its strong projecting capabilities. The task of finding the most innovative technical solutions for the systems continuous improvement is essentially provided by a qualified and professional team, which is constantly updated and trained with new technologies.

For this reason, Lawer continues leading in an increasingly competitive market. Lawer's dosing systems automatically weigh all the powder and liquid ingredients present in the recipes and batches, where the micro

dosage of ingredients is required.

All Lawer's systems are the result of Lawer's 50-year experience and know-how in the design and manufacturing of dosing systems for many different applications in different types of industrial productions.

With the automatic powder dosing systems, it is possible to grant:

- **The highest quality of the finished product**
- **The highest weighing precision**
- **Replicability of the recipes**
- **Right balance of raw materials**
- **Production management, efficiency and cost reduction**
- **Complete confidentiality of know-how**
- **Optimisation of production, less production time**

More time/less costs, the automatic dosage system reduces the production time with consequently recovering of efficiency and marginality.

Confidentiality, it is possible to keep secret the composition of the recipe and protect your creativity and your know-how.

Control, it is possible to monitor and verify the daily production, monthly production, the consumption of each

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single raw material or each single recipe accessing to a protected area.

Replicability, in a fully automatic way, the system repeats countless times the error free weighing of the micro-ingredients of the recipes, guaranteeing constant quality at all times.

Less errors, less cost, higher quality of the finished product.

Traceability, all the weighing operations are saved and made available for a perfect traceability.

Saving, the systems contribute to reducing errors and time in the recipe preparation, thus reducing costs of production and personnel.



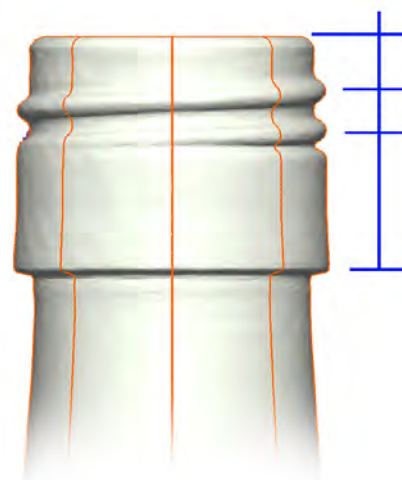
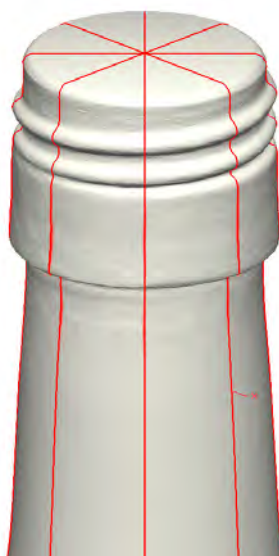
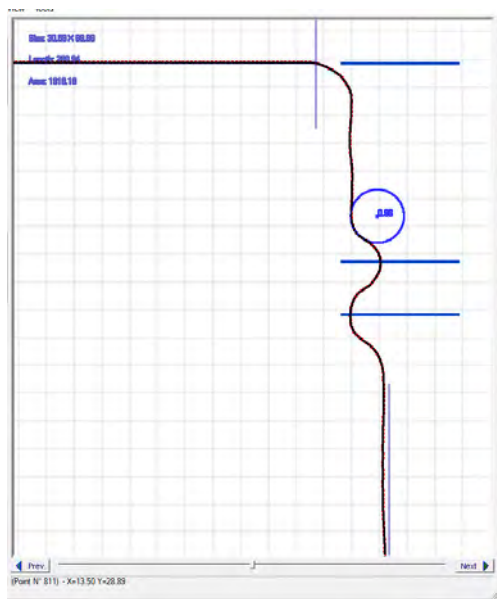
Lawer can supply different models of Automatic Dosing Systems, with sin-

gle, double and multi scale technology (**mod. UNICA TWIN, UNICA HD & SD** and **mod. SUPERSINCRO**), with different levels of accuracy (**1gr - 0.1 gr or 0.01 gr**) and different capacity of powders' storage (from **50 lt** up to **300 lt**. capacity of each hopper). Lawer is the ideal partner for the automation of the powder micro-ingredients dosing. 🏢

www.lawer.com

LAWER®
dosing & dispensing systems






With this function, the software automatically calculates and displays the ovality of a section of the bottle, the accuracy of the bottleneck screw, the symmetry of the neck, the inclination (slope) of the bottle with respect to the plane, any deformations in the lateral surface of the bottle, and much more.

The automatic screw control of the bottleneck, among other things, is very important to ensure a perfect closure of the cap.

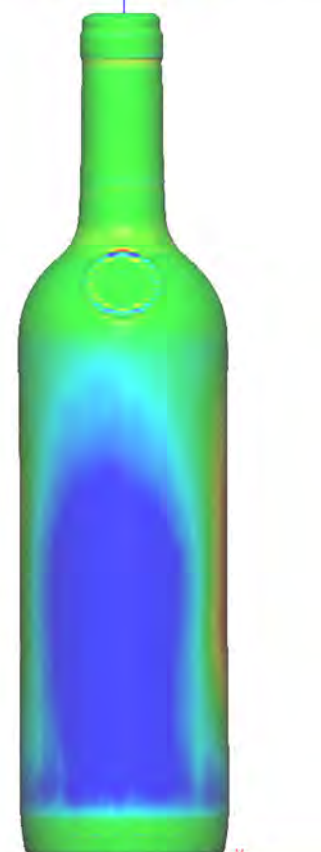
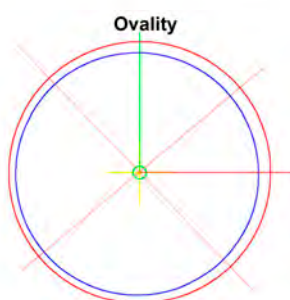
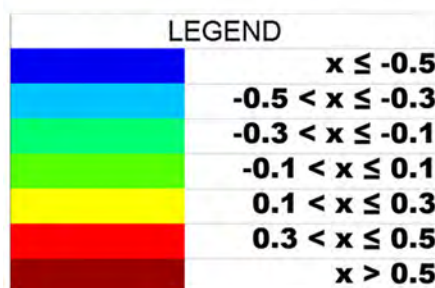
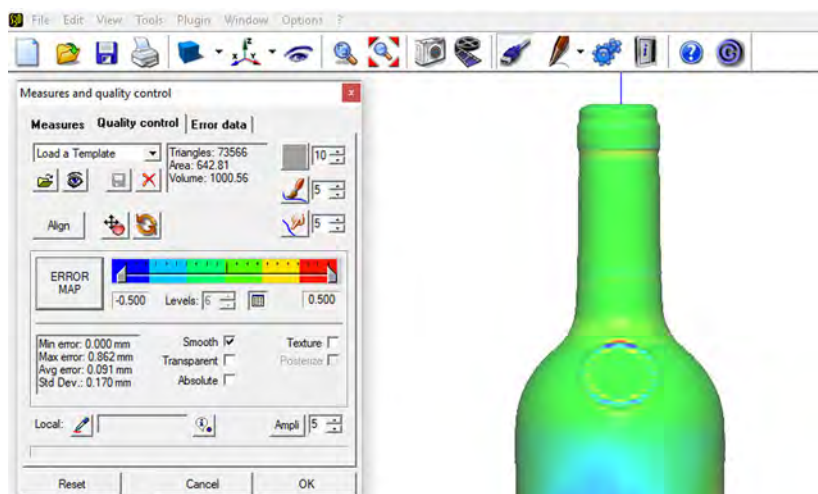
These geometric evaluations are carried out automatically by the software, which generates both a graphical and numerical report, and it is possible to export the results in various formats (eg Excel) for statistical purposes.

The constant mission of the R&D department is to design systems that are increasingly accurate, reliable but at the same time easy to use for the end customer, thanks to the use of cutting-edge technologies. 

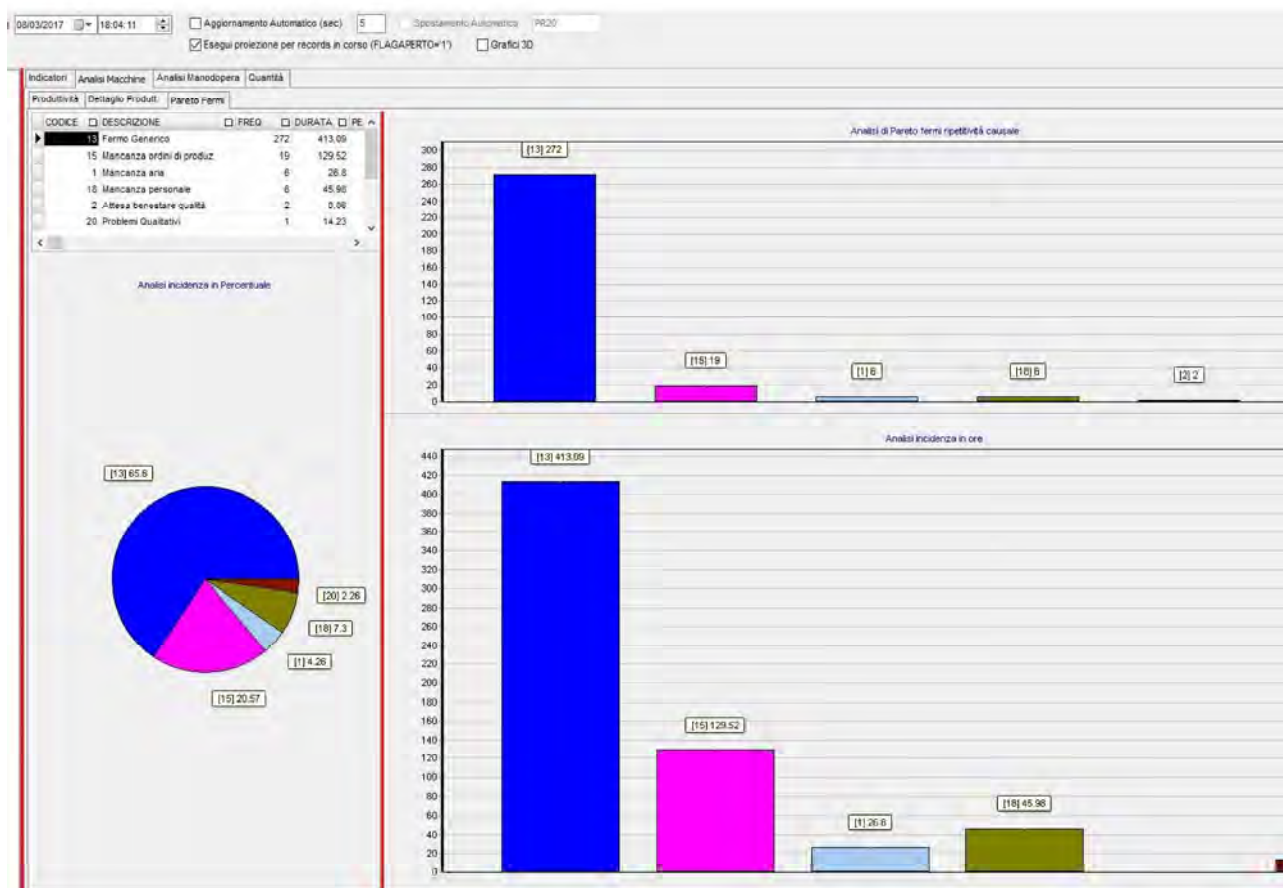
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INNOVO'S MES SOLUTIONS FOR FOOD&BEVERAGE, PACKAGING AND MACHINERY MANUFACTURES



INNOVO

S PHERA® LINE is a vertical MES of the SPHERA® suite, designed for the food sector according to the **INDUSTRY 4.0 paradigm, it can manage:**

- manual production in different workstations, also served by machinery
- automatic production lines for packaging, bottling
- end of line station, with automatic predisposition of palletizers, packaging and the application of identification labels

The main modules of SPHERA® Line are:

- IN/OUT for communication with the ERP, the WMS
- DCS + INDUSTRIA 4.0 for the interconnection of PLC of machines and line conveyour, AGV & LGV

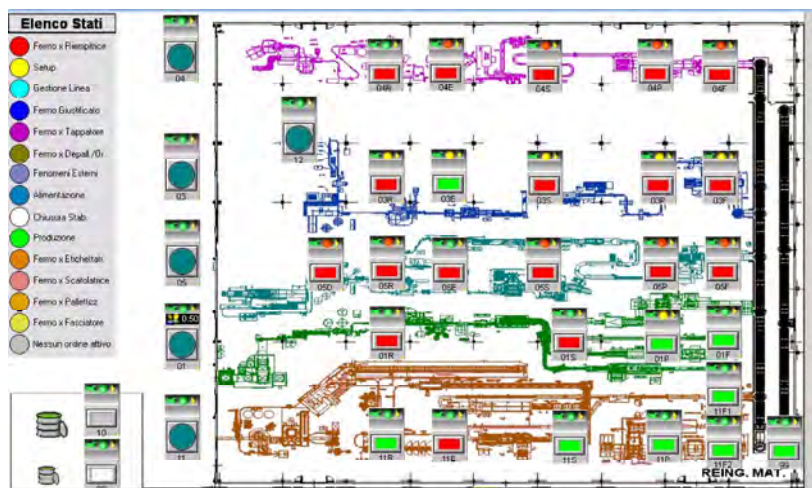
- ENERGY for the detection of energy and materials / pollutants consumption
- SPHERA GUI for plant supervision and shop floor control
- KPI for O.E.E., O.L.E., T.E.E.P. analysis
- INFO for the management and distribution of production information at the workplace
- DTEC for production launch and the calculation of expiration dates

Depending on the modules already present on the ERP, missing features can be added:

- SPHERA TRACK for the management and control of production lots, traceability management



- SPHERA QC for Quality Control Management, printing of summary certificates
- SPHERA MAINT for maintenance management
- SPHERA TIME&PROD for integration with attendance systems, balancing attendance and production
- SPHERA GANTT for manual scheduling
- SPHERA ANDON for the display of alarms and KPI on giant monitors distributed in the departments



SPHERA LINE is parameterizable and configurable for the supervision of the production plant; it is the ideal solution for all companies that perform repetitive work, discrete production or enslaved by production lines, where it's necessary verify in real time the adherence of production to the expected plan and cycle times, the orders progress and manage traceability, logistics and automatic predispositions. If a production line falls below a performance threshold, an alarm is generated and a SMS or e-mail is sent. If the ERP system doesn't have all the technical information, SPHERA DTEC and SPHERA INFO allow you to manage all the technological and manufacturing data of each single article. At the production launch, through PC/ Panel PC, system automatically generate expiry dates and the production batch according to the standards of the country of destination, and automatically prepare

printing on the individual item and on the package. At the end of the line, a simple label printer or an automatic applicator provides for the identification of the pallets produced with SSCC generation in barcode and/or on RFID TAG with other summary data.

The system immediately sends necessary information to the warehouse management system.

INNOVO through its B.U. Penthars also provides equipments such as Panel PC, IIOT terminals, manual readers or fixed readers, RFID antennas and smart labels/tags, label printers, industrial giant monitors, becoming a single interlocutor.

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“PELLACINI TAYLORING SYSTEM”: A PROCESS THAT ELIMINATED PRODUCTION CONSTRAINTS

Pellacini is able to respond to the demands of a market that is increasingly attentive to productivity, safety and economic and environmental sustainability

The Pellacini family started the business at the end of the 19th century, in Parma, in today's Food Valley. Working closely with the first canning industries, Pellacini has experienced all the growth phases of this sector.

Thanks to experience gained in the international arena, is now able to meet the demands of a market that is increasingly attentive to productivity, safety and economic and environmental sustainability.

It designs and manufactures machines, equipment and complete plants for processing fruit, tomatoes, legumes and vegetables appreciated all over the world.

By collaborating with the most important and qualified companies in the sector, Pellacini keeps constant the search for new technological solutions to contribute to the development of the vegetables and fruits processing, confirming its cutting-edge expertise.

Pellacini puts the customer and the project at the center more and more thanks to a new production method, the “Pellacini TAYLORING SYSTEM”: a process which, having eliminated its own production constraints, al-

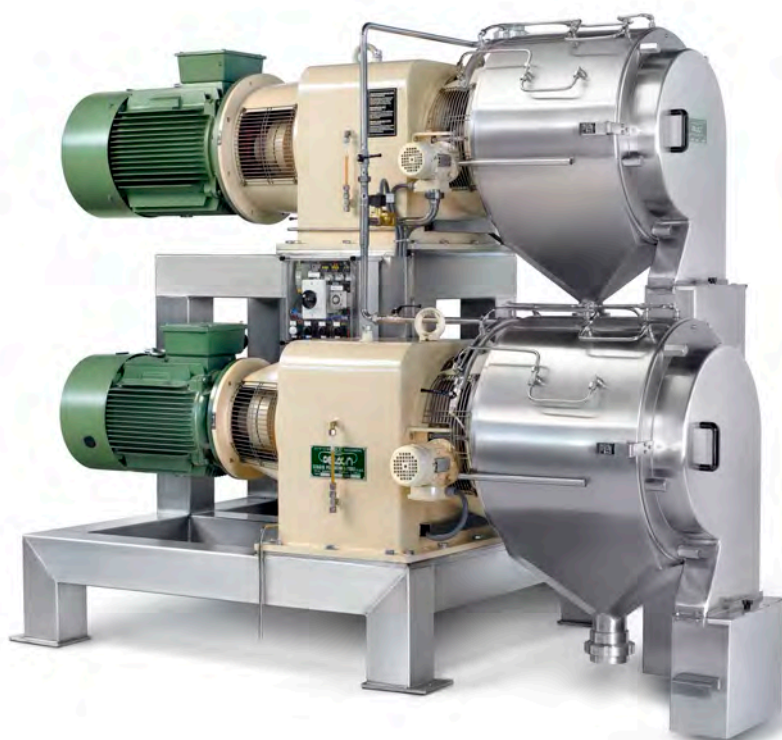




allows for the creation of the perfect equipment for the customer, entrusting its production to carefully selected workshops specialized in individual processes.

Pellacini technology is extremely flexible, reliable, easy to maintain, updated and present not only in the Italian

market but mainly in the main international markets: Europe, South America, North Africa, the Middle East and the Far East. After-sales assistance is punctual and guaranteed also thanks to the archive of the projects of the equipment and systems built over time.



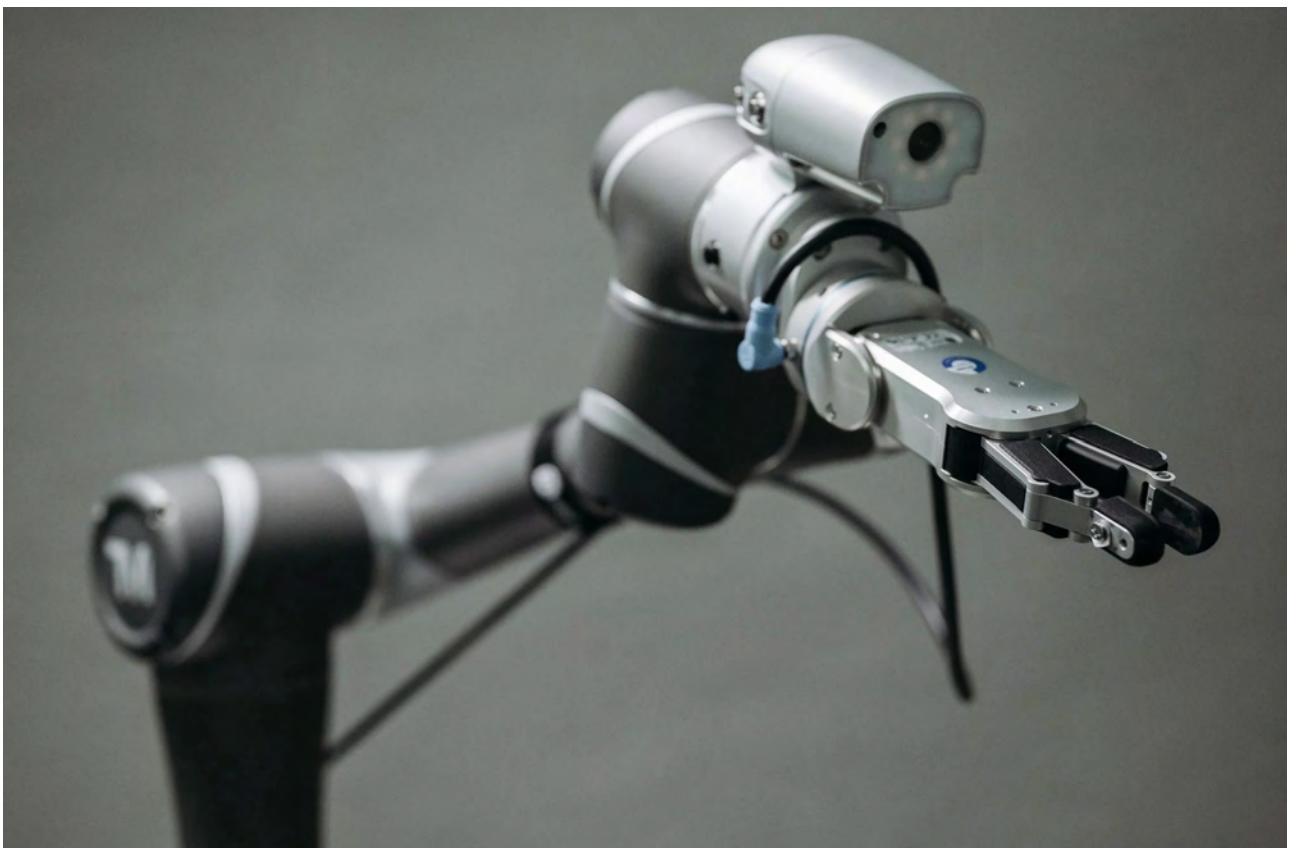
Pellacini designs and produces the lines, all the machines and components for the production of creams, purees and fruit concentrates, juices, nectars, jams and marmelade, vegetable preserves, sauces, condiments, sauces and vegetable concentrates, completing the range with heat treatments, pasteurization, sterilization both in autoclave and continuous, aseptic filling, enzymatic treatments and recovery of production waste. 🏭

www.pellacini.com



“THE WORLD OF PACKAGING BETWEEN ROBOTICS AND ARTIFICIAL INTELLIGENCE”

The use of robotics and artificial intelligence in packaging is increasing, providing benefits in efficiency, quality, and sustainability. However, companies must consider costs and invest in training for effective use



images: unsplash.com

The world of packaging is undergoing a rapid evolution thanks to the introduction of robotics and artificial intelligence. In recent years, advanced technologies have radically changed the way companies produce and package their products, offering advantages in terms of efficiency, precision, and sustainability.

One of the main benefits of using robots in packaging is the increase in speed and efficiency. Robots can work 24/7 without interruptions or slowdowns, improving productivity and reducing delivery times. Additionally, robots can be programmed to work precisely



by Our Editorial Team

continued on page 79

PNEUMAX S.P.A. COMPONENTS AND SYSTEMS FOR INDUSTRIAL AUTOMATION

Pneumatic components, electric actuation
and fluid control

Founded in 1976, Pneumax S.p.A. has become one of the leading international players in the field of industrial and process automation components and systems.

The company is at the head of the Pneumax Group made up of 23 commercial and production companies with over 730 employees worldwide.

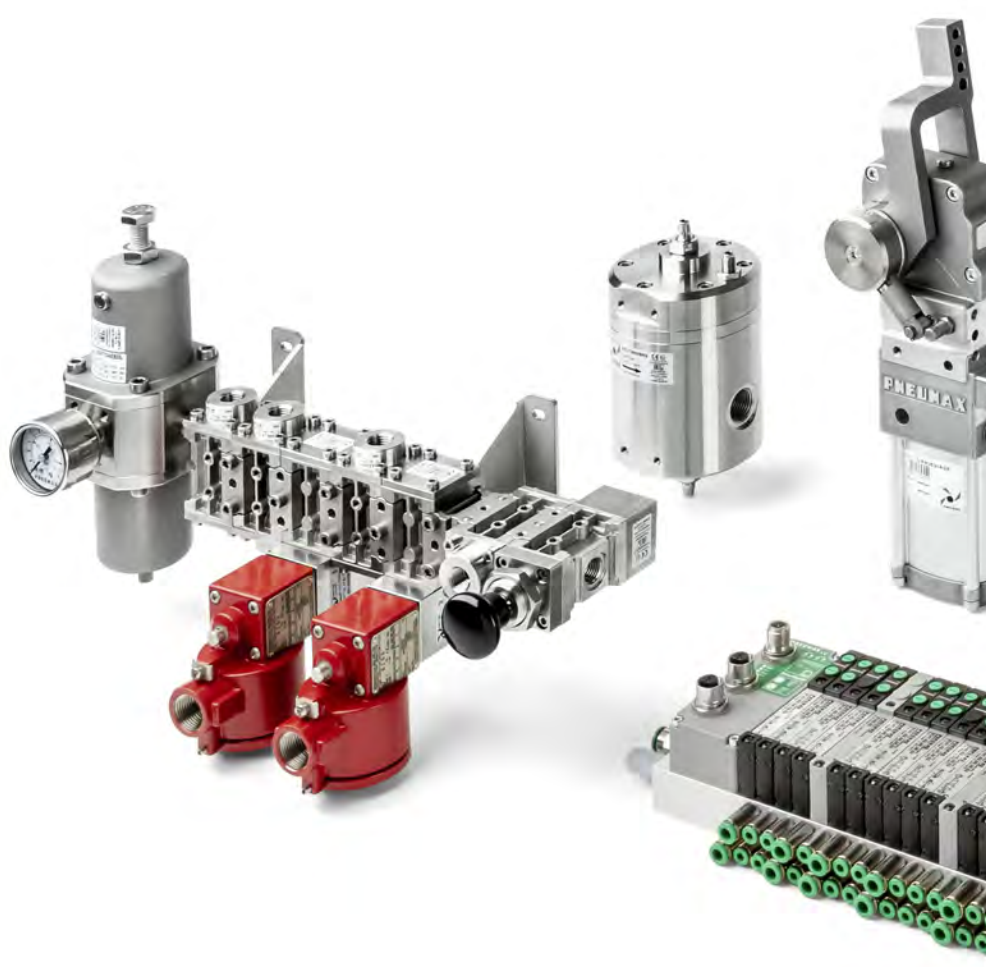
The international network includes 7 branches in Italy, 8 branches in Europe in addition to branches in the USA, Brazil, India, China and Singapore, and a vast network of distributors that guarantee presence in over 50 countries.

All of the Pneumax Group's manufacturing facilities are located in Italy, the seven units in Lurano (BG) plus Titan Engineering in San Marino.

All the facilities comply with the environmental and workplace safety requirements set out in standards ISO9001:2008, ISO 14001:2004 and OHSAS 18001:2007.

Continuous investment in research and development has enabled Pneumax to expand its offer by combining well established pneumatic technology (actuators, valves and solenoid valves, proportional technology, fittings, compressed air treatment, materials handling, vacuum), with electrical actuation and components for liquid and gaseous fluid control and offering solutions made from differ-

ent materials ranging from stainless steel to engineering polymers or from aluminium to brass. The organisational structure designed to maximise flexibility and the use of cutting-edge technologies ensure maximum efficiency both for the supply of standard components and the creation of completely customised solutions. At the same time, the development of mechatronic and digital expertise underlies the creation of integrated systems which, thanks to enabling technologies, are capa-





ble of meeting the requirements of Industry 4.0, from component interconnection to the ability to remotely control and manage component performance, without ever neglecting aspects such as optimising consumption.

FCM fittings

Food Contact Material

The food & beverage and food packaging sectors are two

of the sectors for which the company offers specific products such as the entire range of stainless steel components (cylinders, valves and solenoid valves, FRL, fittings) or FCM fittings which, in addition to ensuring reliability and high performance, comply with relevant international standards.

FCM fittings are suitable for contact with food and the passage of food fluids according to European Regulations (EC) 1935/2004, (EC) 2023/2006, (EC) 11/2011 and contact with drinking pursuant to Italian Ministerial Decree DM 174/2004.

The FCM series is made by Titan Engineering, a company of the Pneumax Group which has specialised for over 25 years in the design and production of fittings and connection components made of brass, engineering polymers or stainless steel for pneumatic circuits.





With regard to application, the FCM series fittings hold certifications not only for contact with food, but also for suitability for the passage of food fluids, a requirement certified by testing carried out according to precise specifications using machinery introduced during validation of Titan Engineering's production process, carried out in compliance with European Directive 2014/35/EU and capable of carrying out tests on the basis of the standards specified by UNI EN ISO 1386: 2001 and later.

The tests include all component materials, already compliant with FC (Food Contact) standards, as well as plastic parts in POM (polyoxymethylene) and IXEF 1022FC (polyarylamide 50% GF) and metal parts in brass OT57 (CW510L with low lead content, NSF/ANSI 372 certified).

The certification guarantees component tightness under pressure, not only with drinking water but also with

other food fluids such as wine, beer and beverages in general.

In order to guarantee maximum quality and reliability in the context of a procedure set out in specifications under the new European Regulation (EU) 831/2018, now familiar to industry insiders as MOCA, the Pneumax Group has undertaken a validation procedure not only for its own production processes, but also for the entire supply chain to ensure compliance with the guidelines specified by the certification bodies. 🏛️

www.pneumaxspa.com



PNEUMAX



and repetitively, reducing human errors and improving product quality.

Artificial intelligence is another technology that is revolutionizing the world of packaging. Thanks to AI, machines can continuously learn from their environment, improving their performance and adapting to new situations. For example, machines can use artificial vision algorithms to detect defects or anomalies in products, reducing the risk of errors and improving product quality.

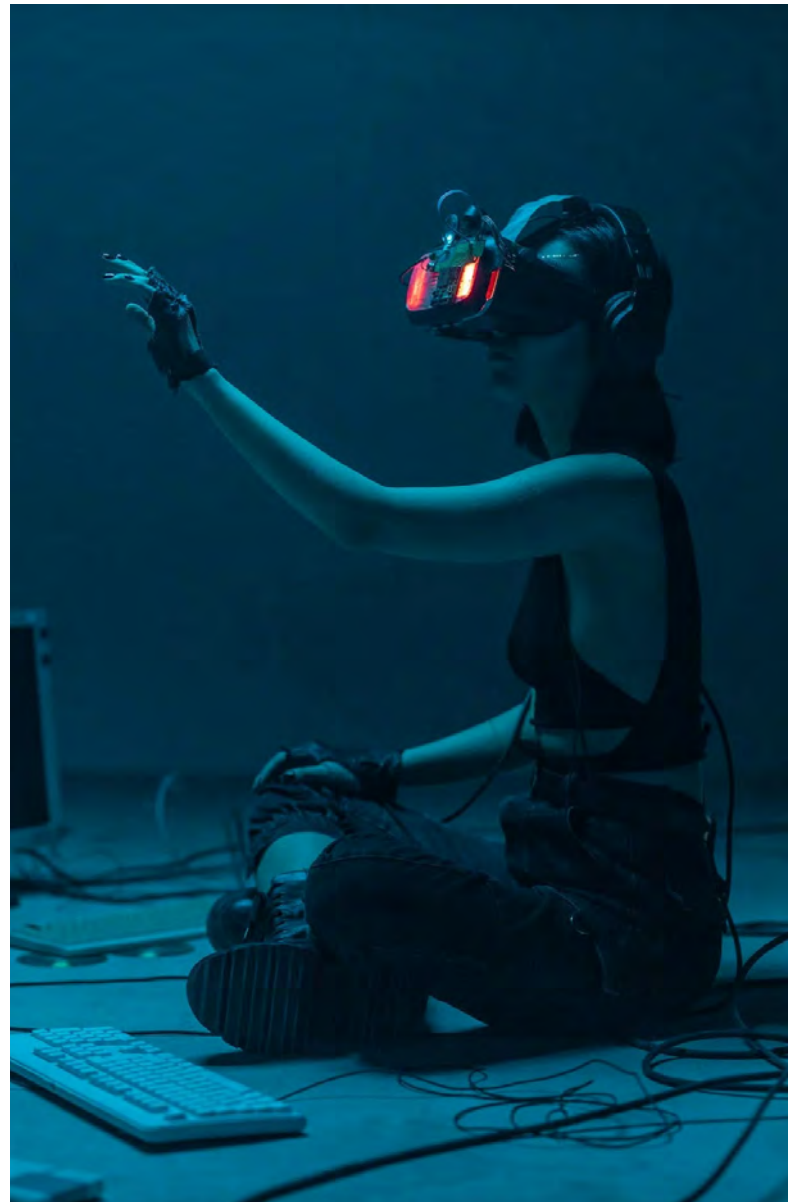
Another advantage of using robotics and artificial intelligence in packaging is the reduction of waste and environmental impact.

Machines can work with greater precision and use only the amount of material necessary to package products, reducing waste and energy consumption. Additional-

ly, machines can be programmed to recycle or reuse packaging materials, reducing environmental impact.

However, the introduction of robotics and artificial intelligence in the world of packaging is not without challenges. For example, companies must invest in expensive technologies and train personnel to use them effectively. Additionally, machines can be subject to malfunctions or breakdowns, causing interruptions in production and additional costs for maintenance.

In conclusion, the world of packaging is becoming increasingly robotic and intelligent, offering numerous advantages for companies that decide to invest in these technologies. However, it is important to carefully evaluate the costs and benefits before making a decision and ensure that personnel are adequately trained to use the machines effectively.



THE CONFECTIONERY SECTOR IN THE ERA OF HEALTHY FOOD

In the confectionery market, as in the large-scale retail, the search for healthy products seems to be an unstoppable trend: the modern consumer, stimulated by the emergence of new styles of consumption, is increasingly looking for natural, organic and free from products.

New purchasing habits that, on one side, depend on the greater attention to eating disorders (in industrialized countries, gluten intolerance has grown by more than 20% in the last 5 years), but also on the perception the consumer have about these products understood as “healthier”.

Here then, the clean label becomes the lever that drives the purchase decision: the absence of dyes,

preservatives or allergens is one of the most appreciated characteristics.

The combination of food and well-being pushes the consumer to prefer products of certain and/or certified origin, so doing products “without”, organic, IGP, Zero miles and local, are increasingly gaining space.

A search for naturalness that affect the confectionery sector, which records growth rates before pandemic up to +8% per year, of which over 40% comes from bakery products, followed by chocolate and cocoa products (over 30% approximately), ice cream (15%) and confectionery. In this new, highly specialized market segment, it becomes essential for success, to know how to renew its own production and anticipate consumer trends, which





Understanding the taste of the modern consumer means giving priority to natural ingredients without additives, dyes or preservatives in favour of quality.

Cesarin studies new methodologies to preserve the authenticity of fruit and vegetable flavors for the sweet and savory industry.



are increasingly demanding in terms of naturalness and ethics.

In this context, Cesarin S.p.A, an Italian company of semi-finished fruit and vegetable products, that has made innovation its competitive advantage, stands out.

With over 100 years of experience in the processing of **candied fruit**, **Cesarin** has been able to anticipate market trends to propose high-quality solutions that guarantee the maximum attention in the search for raw materials from certified origin and the absence of artificial flavours, dyes and preservatives.

An example of this is the line of Fruit HG with low water activity: it is a product studied in the Company Research Development Centre, that inhibits the activity

of water and keeps unaltered the taste and structural characteristics of the raw material, with a softness and a fresh flavour not comparable to a traditional dehydrated or freeze dry product.

Created as an inclusion for chocolate bars, today it finds its best use in the production of biscuits, energy bars and cereal mixes. The product is naturally gluten-free, contains no artificial colours and is OGM free.

Fruit HG Cesarin is also available in the Light version without added sugars (sweetened with maltitol) in the flavours most requested by the international market: from classic red and yellow fruits, to the more exotic flavours of mango, pineapple and papaya and the highly

appreciated lime and ginger, or in the version with Sorbitol for excellent resistance to high temperatures and soft texture after baking. Following the trend of freshness, naturalness and low sugar added, Cesarin offers as an alternative to the traditional candied fruit, the Semi-candied fruit TuttaFrutta, obtained by a cold process from the best fresh fruit on the market, ideal to garnish and fill baked products or ice cream.

But in **Cesarin** the focus is not exclusively on the sweet pastry side. Over the years, the company has established itself on the international market also for the search for a line of vegetables dedicated to the food industry.

An example of this is the **Vegetables HG with low water activity** that represent the perfect solution to all the problems associated with the use of dehydrated or frozen vegetables: stabilization in fact allows the preservation of vegetables through

the partial inhibition of the water activity naturally present in the fresh raw material.

This process guarantees a better organoleptic appearance and a less fibrous structure than dehydrated products and a higher resistance to mechanical stress as well as less water release than frozen products.

The stabilized vegetables are obtained from vegetables harvested strictly by hand at the right degree of ripeness, to ensure the high-quality standard. Stabilized vegetables can be used as a topping to improve the aesthetic appearance or as an ingredient in sandwiches, ready meals, quiches, crackers, breads and rice/pasta salads.

Talking about sugar-free foods, Cesarin launches the **MisterAlberto line - Without Sugar Added** on the occasion of the company's 100th anniversary, to celebrate the company's founder.





The **MisterAlberto** line includes fruit jams and ice cream ripples with over 50% less sugar than the average standard products, designed to enhance some of the best Made in Italy products. In this case the choice falls on the natural sweetness of the raw material and on the nutritional properties of the fruit.

In addition to the MisterAlberto line, Cesarin is famous for the quality of the jams produced, all bake stable, and the various fruit preparations aimed at the food industry.

Many innovations and many alternative products that do not forget the fundamental relationship with the territory of origin: Cesarin is very attentive to its environmental impact.

This is demonstrated by the strict controls to which the Company is periodically subjected as the environmental management system (EMS) conforming to ISO 14001:2004, those to the progressive reduction of resources used, the continuous improvement of its infrastructure in terms of environmental impact, through the search for effective and increasingly efficient solutions. 🏢

For more information:
Cesarin S.p.A Verona (Italy)
www.cesarin.it



Cesarin®
 dal 1920

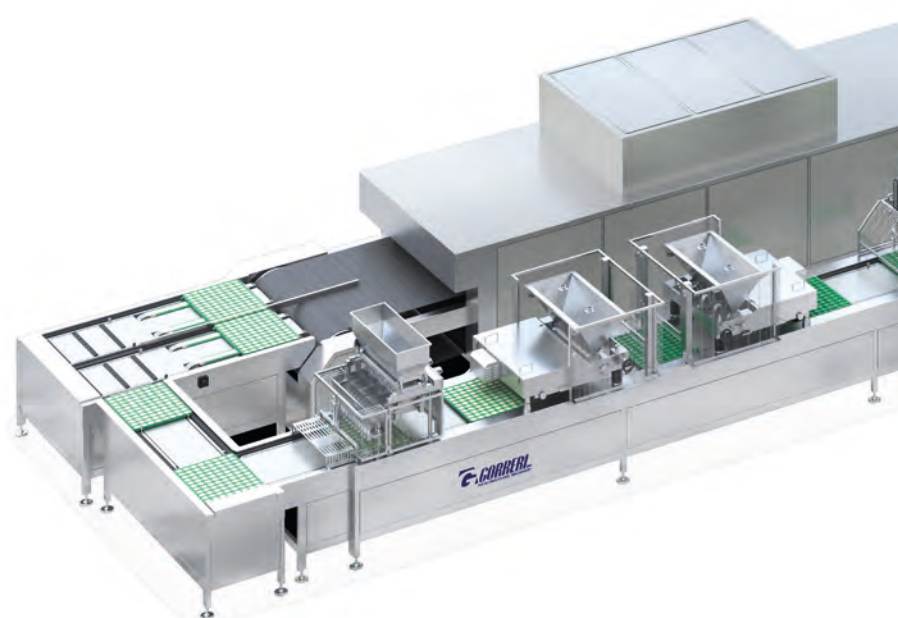
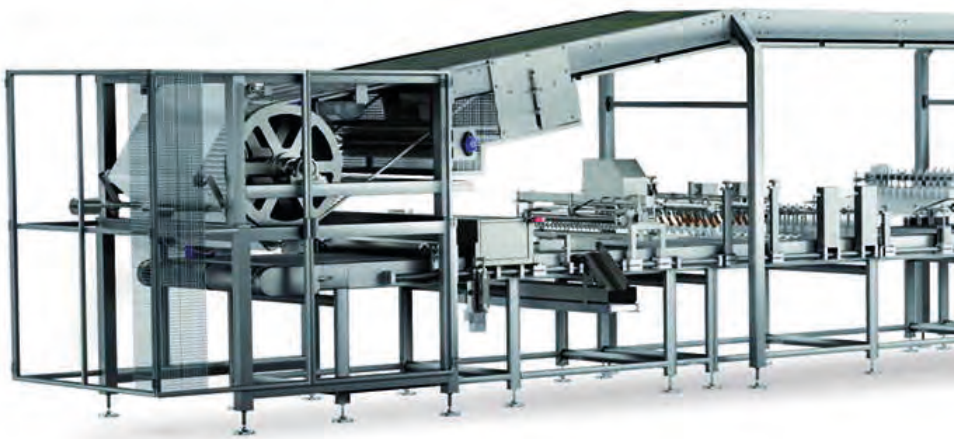
A UNIQUE AND COMPLETE HIGH-TECH WORLD

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.

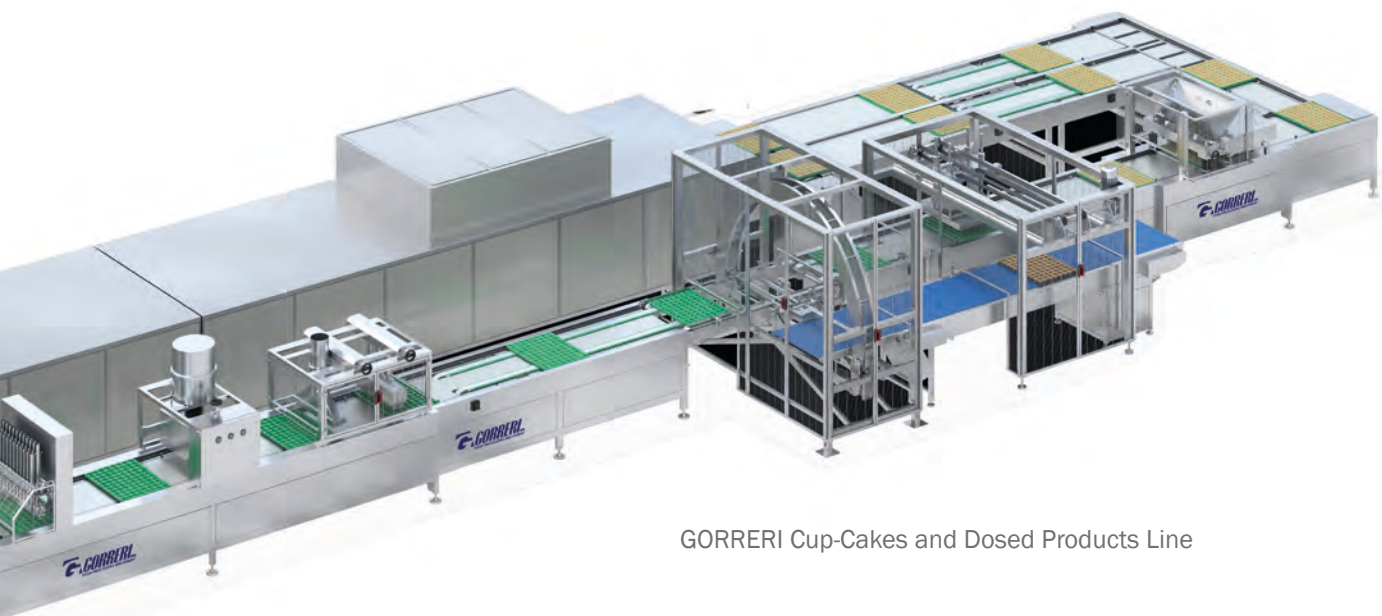
MATCHLESS MIXING SYSTEMS. GORRERI TURBOMIXER®, the famous and unique turboemulsifier with vertical head is an innovative in-continuous mixing system, fruit of many years of experience that through a bright solution like VERTIMIX TECHNOLOGY® is able to emulsify, in few minutes, batters, cream, mousse,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



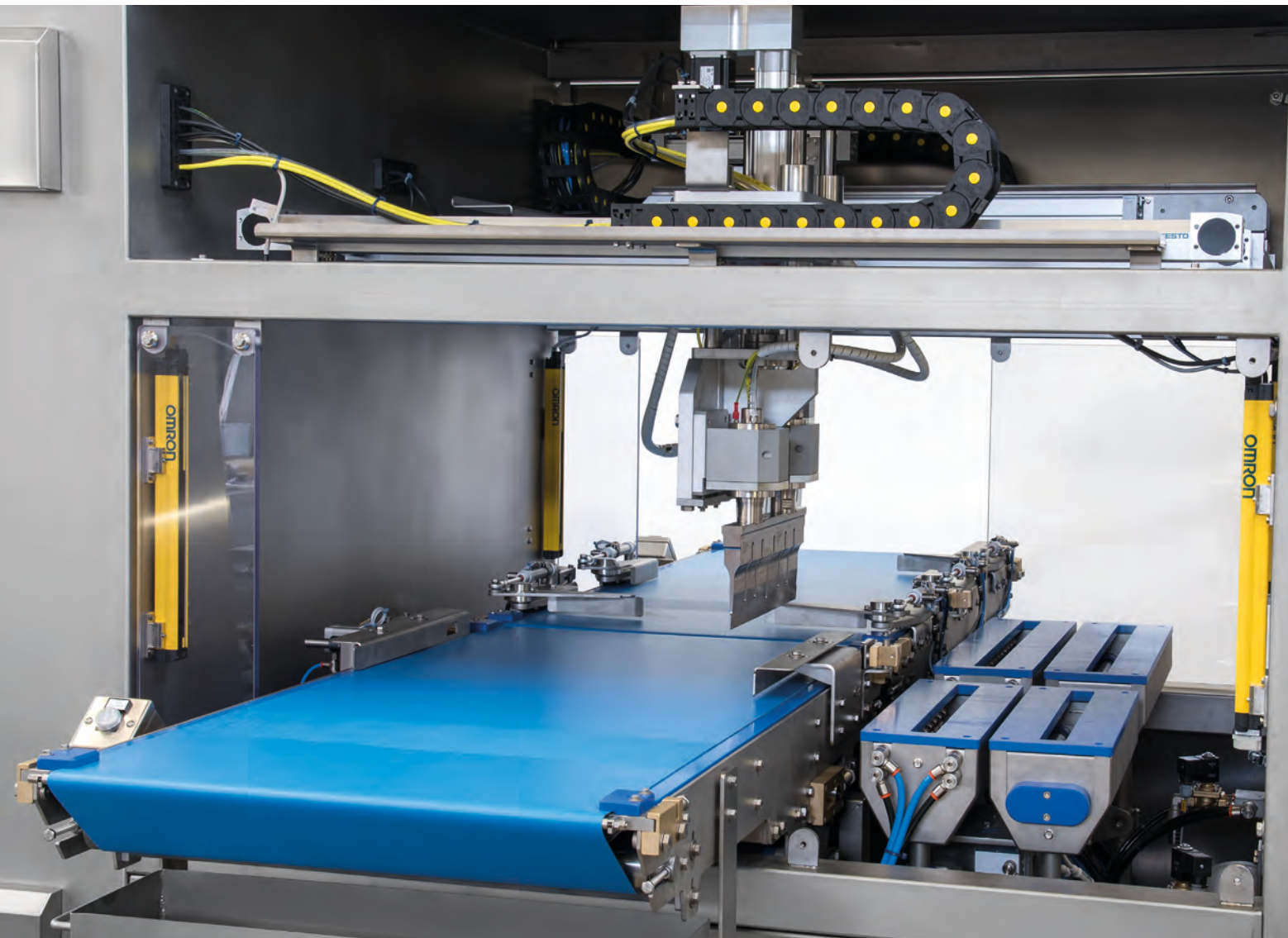


GORRERI Sponge-cake Line



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 capabil-





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.

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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

SOTTORIVA, BETWEEN TRADITION AND ZERO-STRESS INNOVATION



MR8 2.0, automatic divider for industrial production

Sottoriva, an Italian company that for over 70 years has been manufacturing machines for bakeries, pastry shops and pizzerias, is known worldwide for the wide range of its offer: from small mixers to complex industrial lines, all made in Italy, very competitive in terms of quality.

The company's distinctive feature is to be able to understand the market needs, especially in the food sector, where needs change quickly.

Nowadays, in fact, consumers are more and more careful about the quality of products and therefore to the ingredients used to make them. As far as bread making is concerned, this involves the need to make quality bread, without chemical preparations or shortcuts, while maintaining the natural leavening of the product. For this reason, Sottoriva has conceived **zero stress dividers**, with an innovative system to process leavened dough. What does zero stress mean? It means that the dough is treated by the machine with great

care, in order to keep inside the air produced by leavening and in this way facilitate its development, thus obtaining a product of extreme lightness and fragrance.

Studied and developed in the last few years, this system maintains the natural leavening time of bread, respecting the true Italian gastronomic tradition.

The company has developed various dividers with this technology.

The **MR8 2.0** model, designed for the industry, is a laminating machine that cuts and shapes in a practical and precise way, without ever stressing the dough. The result is a high-quality bread, very similar to the artisan bread but with an industrial production. This divider is equipped with a sensor that can detect the characteristics of the dough, to treat it in a delicate way. It is ideal for soft and leavened dough, such as ciabatta, French bread and all the types of bread fashionable today, such as the triangle and the diamond, for example. It is also a very versatile



Athena Plus, divider rounder suitable for industrial production

machine that can be set quickly and easily according to the customer's needs.

Even **Athena Plus**, a high production divider rounder, has a zero stress system.

This machine, that does not stress the dough, has a very high weight accuracy, maximum flexibility and a range of weight range from 25 to 600 g. It is a machine suitable



Dinamica, divider rounder suitable for medium production


to divide and round dough to make round and stamped bread, hamburger bun, long-loaf bread, pita, pizza, tortilla and many others.

Athena Plus can also be equipped for the treatment of gluten-free dough, whose demand is growing strongly, managing to work in the best way even the stickiest gluten-free dough.

The **Dinamica** model is also part of the production range, divider rounder whose name already announces its intrinsic characteristics.

It is indeed a machine that allows a great flexibility of weight, always ensuring a great accuracy in the final result. Here too we find the zero-stress system: it works in a delicate way both soft and semi-hard dough.

And finally **Lyra**, a two-row divider rounder designed to satisfy even the smallest production with extraordinary precision. Available in both mechanical and electronic versions, it is ideal for the production of round bread perfectly leavened.

Four dividers with different characteristics and production capacities, designed to allow both small and industrial bakeries to benefit from the new zero-stress technology. 

www.sottoriva.com



Lyra, divider rounder suitable for medium-small production

“THE ART OF SWEETNESS: WHEN COMPANIES COMPETE WITH MASTER ARTISANS”

The Evolution of Industrial Confectionery
Production Challenging Tradition

The world of sweets has always been associated with the craft of artisans, with pastry chefs and chocolatiers meticulously working to create unique and irresistible delicacies. However, in recent years, some food companies have embarked on an epic challenge: to produce confectionery products with the same quality and attention to detail as master artisans.

This trend has been driven by the growing consumer demand for high-quality sweets, coupled with the need to achieve large-scale production. Some companies have



by Our Editorial Team



images: pexels.com

shown that it is possible to combine the best of both worlds: the consistency and precision of industry and the authentic flavor and craftsmanship.

The Secret of the Equation: Technology and High-Quality Ingredients

The key to this success has been technological innovation and the use of high-quality ingredients. Leading confectionery companies are investing in cutting-edge machines that can replicate the gestures and techniques of an experienced pastry chef.

These machines can mix, knead, and bake with a precision that was unimaginable just a few years ago.

But technology alone is not enough.

The secret ingredient of these companies is the choice of top-quality ingredients. Belgian chocolate, French butter, Piedmontese hazelnuts, Bourbon vanilla—these are just some of the ingredients found in the products of these companies. The quality of the ingredients is essential to achieve the desired authentic flavor and consistency.

The Art of Balance: Quality and Large-Scale Production

One of the biggest challenges for these companies has been finding the balance between quality and large-scale production.



Producing sweets on an industrial scale without compromising taste and consistency requires extraordinary attention to detail.

To do this, many companies have developed advanced quality control methods, employing expert tasters and chemists to ensure that every batch of products meets the highest standards.

This commitment to quality has allowed these companies to earn international certifications and recognition.

The Consumer Experience

But what do consumers think? The answer is surprising. Many consumers have enthusiastically embraced sweets produced by these companies, appreciating the consistent quality and wide availability of products they offer. Mass-produced sweets with artisanal quality have found a special place in the hearts and tables of many people.

The Future of Sweetness: A Blend of Tradition and Innovation

In conclusion, the confectionery sector is undergoing a true revolution, in which some companies are challenging artisanal tradition with high-quality large-scale production. The use of advanced technology and exquisite ingredients is opening new opportunities for the world of sweets.

While artisanal confectionery will continue to hold a special place in the hearts of consumers, these companies are demonstrating that it is possible to blend tradition with innovation, offering exceptional sweets to a broader audience. The future of sweetness looks promising, with a blend of tradition and innovation that will satisfy the palates of all.





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
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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।

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.

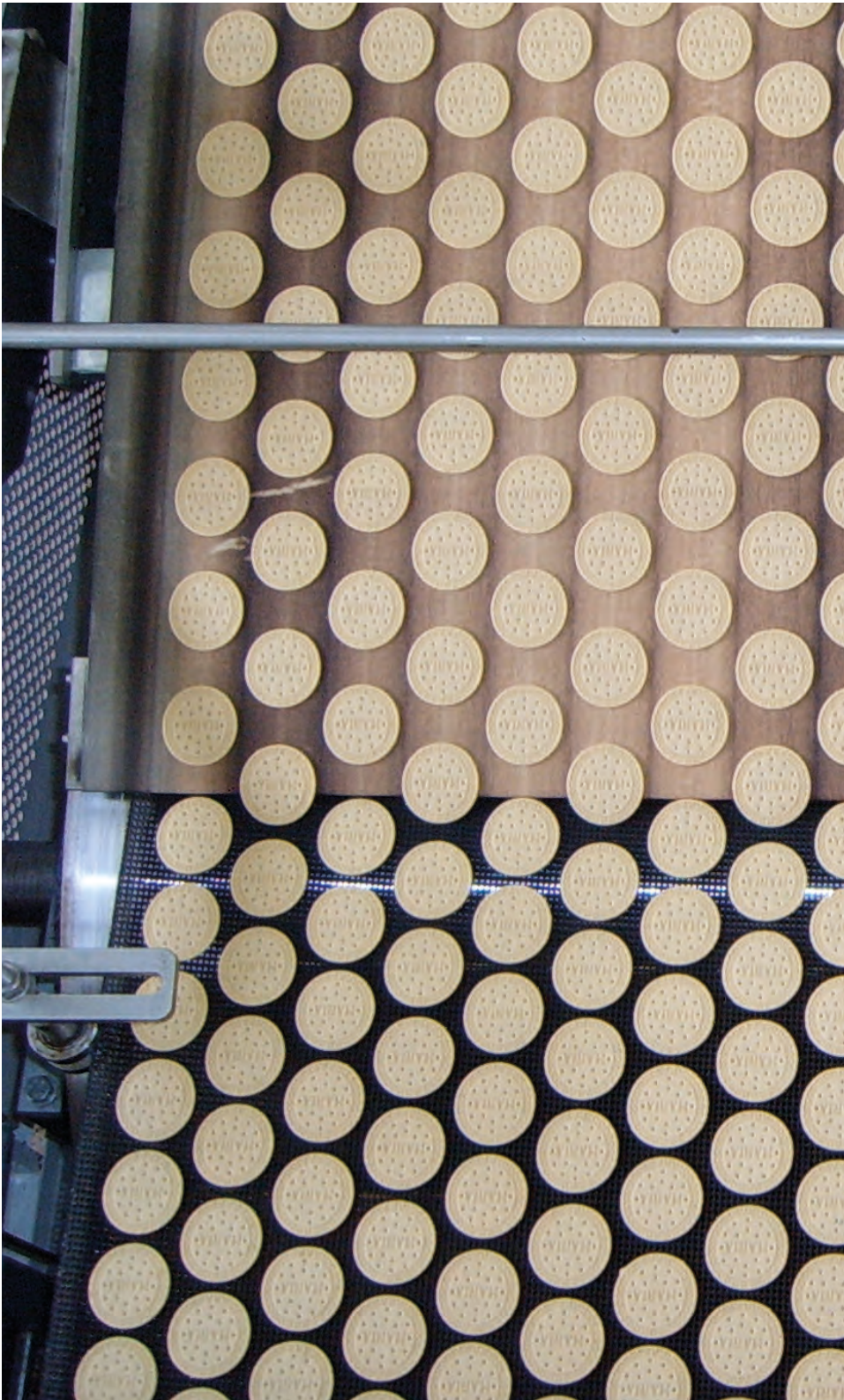
Thanks to its remarkable propensity for export and to the tailor-made, each line is taken care and customized in every single detail according to the requests of the customer and to the characteristics of the final product.

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.

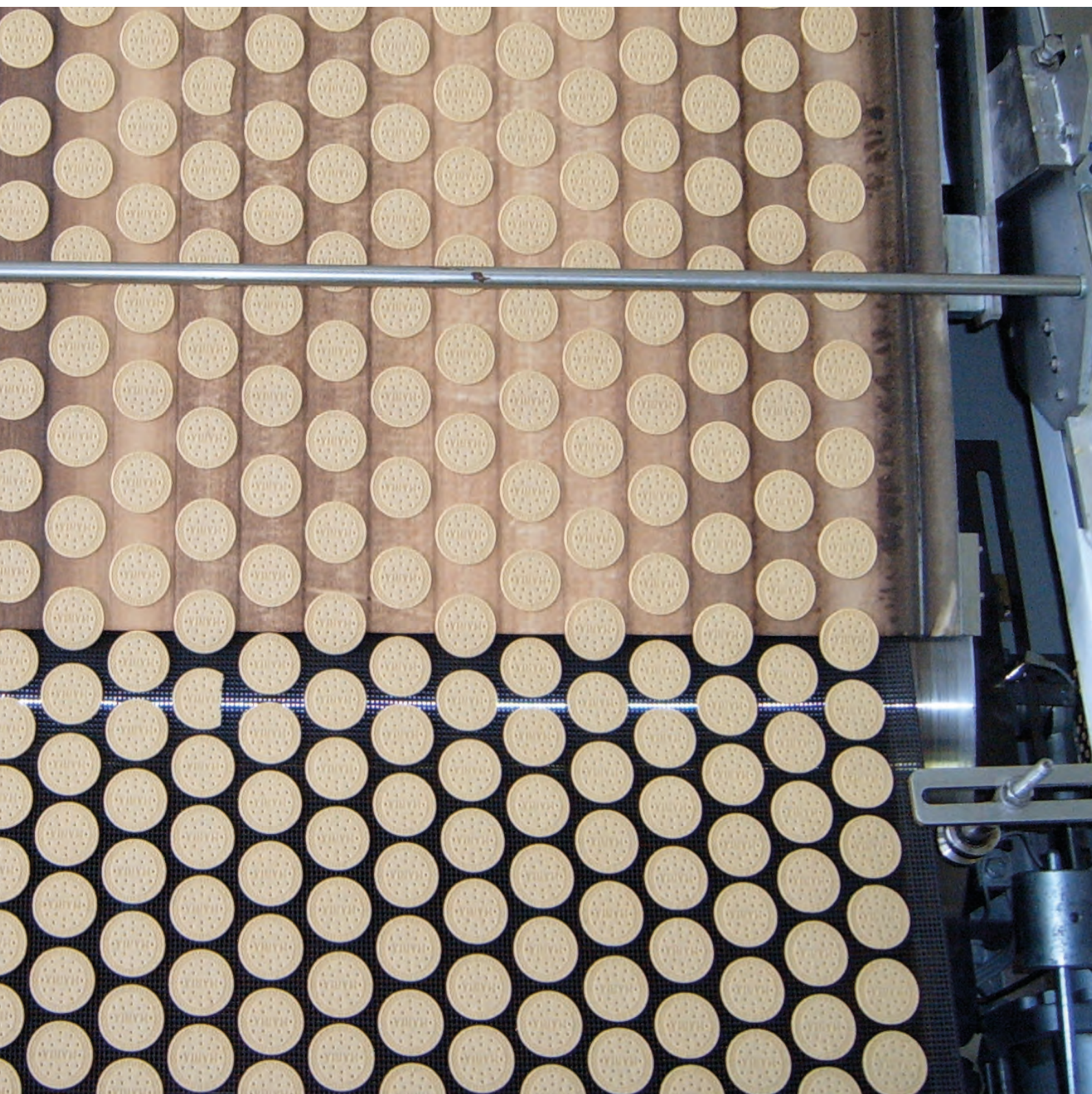
Special version of the machines for wash-down execution, Alergen free production, petfood productions are available upon request.

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. 🏭




EXHIBITIONS 2023-2024

PROWEIN

19-21/03/2023 
DUSSELDORF

International wine & spirits exhibition.

MECSPE

29-31/03/2023 
BOLOGNA

Fair for the manufacturing industry.

VINITALY

02-05/04/2023 
VERONA

International
wine & spirits exhibition.

PROSWEETS

23-25/04/2023 
COLOGNE

Fair for the sweets and snacks industry.

MACFRUT

03-05/05/2023 
RIMINI

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

CIBUS

03-06/05/2023 
PARMA

Fair of food product.

INTERPACK

04-10/05/2023 
DUSSELDORF

Technology focused
on packaging, bakery, pastry technology.

TUTTOFOOD

08-11/05/2023 
MILAN

Fair B2B show to food & beverage.

SPS/IPC/DRIVES/ ITALIA

23-25/05/2023 
PARMA

Fair for industrial
automation sector.

BEER&FOOD ATTRACTION

19-22/06/2023 
RIMINI

Fair for beers, drinks,
food and trends.

FISPAL

27-30/06/2023 
SÃO PAULO

Fair for product from packaging.

MCTER

29/06/23 
ROMA

Exhibition on energy efficiency.

POWTECH

26/29/10/2023 
NUREMBERG

The trade fair for powder processing.

HOST

13-17/10/2023 
MILAN

Fair for bakery production
and for the hospitality.

IBA

22-26/10/2023 
MONACO

Fair for the bakery and confectionery
industry.

MIDDLE EAST 2023/24

GULFHOST

2023 
DUBAI

Fair of hospitality.

GULFOOD

20-24/02/2023 
DUBAI


Fair for food
and hospitality.

GASTROPAN

17-19/03/2023 
ARAD

Fair for the bakery
and confectionery.

DJAZAGRO

05-08/06/2023 
ALGERI Fair for companies
of the agro-food sector.

IRAN FOOD+BEV TEC

10-20/06/2023 
TEHRAN

Fair for food, beverage&packaging
technology.

PROPACK ASIA

14-17/06/2023 
BANGKOK

Fair for packaging,
bakery, pastry.

PACPROCESS FOOD PEX

07-09/09/2023 
MUMBAI

Fair for product from packaging.

ANUTEC

07-09/09/2023 
NEW DELHI

Fair for the food&beverage industry.

HOSPITALITY QATAR

06-08/11/2023 
DOHA

Fair of Hospitality
and HORECA.

GULFOOD MANUFACTURING

07-09/11/2023 
DUBAI

Fair for packaging and plants.

EXHIBITIONS 2023-2024

CIBUS TEC

24-27/10/2023 🏛️

PARMA

Fair for food & beverage technologies trends.

SUDBACK

26-29/10/2023

STUTTGART

Fair for bakery and confectionery.

BRAU BEVIALE

28-30/11/2023 🏛️

NUREMBERG

Fair of production of beer and soft drinks.

PROSWEETS

28-31/01/2024 🏛️

COLOGNE

Fair for the sweets and snacks industry.

ANUGA FOODTEC

19-22/03/2024 🏛️

COLOGNE

Fair on food and beverage technology.

LATINPACK

16-18/04/2024 🏛️

SANTIAGO CHILE

International packaging trade fair.

HISPACK

07-10/05/2024 🏛️

BARCELONA

Technology fair for packaging.

FACHPACK

24-26/09/2024 🏛️

NUREMBERG

International packaging trade fair.

SIAL

19-23/10/2024 🏛️

PARIS

Fair on food products.

ALL4PACK

04-07/11/2024 🏛️

PARIS

Exhibition about packaging technology.

SIMEI

12-15/11/2024 🏛️

MILAN

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

IPACK-IMA

27-30/05/2025 🏛️

MILAN

Exhibition about food and non-food processing and packaging.

DRINKTEC

2025

MONACO 🏛️

Fair for the beverage, liquid food industry.

SAVE

2026

VERONA 🏛️

Fair for automation, instrumentation, sensors.



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1/6

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80/83

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**OCTOBER
2023**

ABOUT FOOD + TECH PAKISTAN

15th edition of Food + Tech Pakistan – A complete exhibition for our growing food industry. This exhibition will bring world's best food suppliers, manufacturers and technology to Pakistan. It is the most anticipated event for leading Technologists, Importers/Exporters/General Traders, Food Certification, Processing and Packaging Companies.

EXHIBITOR PROFILE

Food + Technology Pakistan is the most worthy platform for companies to meet with their industry peers having relevancy with the topics below:

- **Food Processing Technology & Equipment**
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