

# FOOD

USA

## PROCESSING

it. MAGAZINE

n° 11-2022

**BEVERAGE & PACKAGING**

**PROCESS  
AND PACKAGING**



**NAVATTA GROUP**

Food Processing S.r.l.

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fruit & vegetables processing  
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# Cavanna, leader in turn-key primary and secondary packaging lines



**Cavanna** know-how includes a wide portfolio of **turn-key primary** and **secondary packaging** solutions for **Bakery, Confectionery, Ice Cream, Ready2Eat, Petfood** and **Pharma**.

**Handling, buffering, flowpacking and multipacking.** As well as high efficiency **Form/Fill/Seal cartoning monoblocks**, through **Cartesian and Delta type robotics** with innovative **Vision Systems**.

A **dedicated team** manages **Cavanna** developments and **innovations** in **packaging design**, with a particular focus on **Sustainable Circular Economy**.

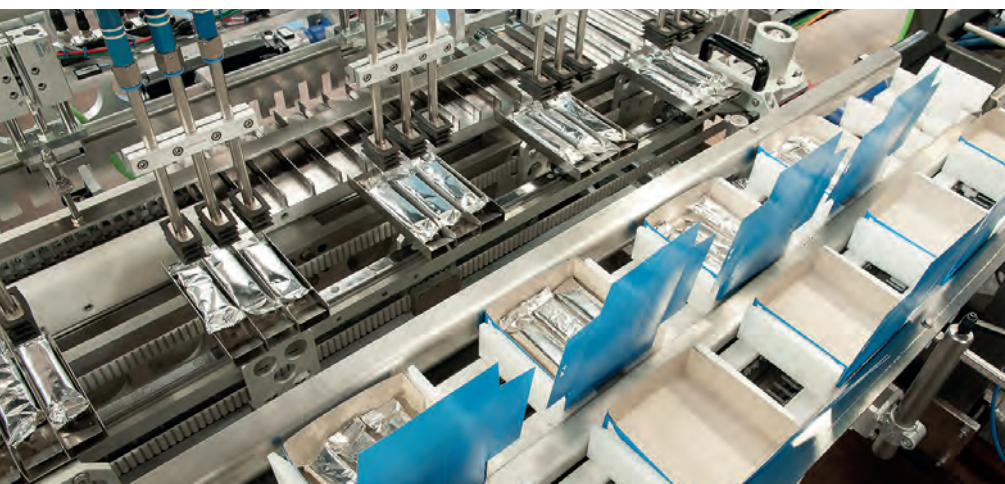
At our **C-Lab** we test films every day, **paper-based, compostable** and fully **recyclable plastic mono-materials**.



With **exciting results**, which we would be pleased to **share with you**.

Contact us at [sales@cavannagroup.com](mailto:sales@cavannagroup.com)

*"Your family  
global partner  
in turn-key primary  
and secondary  
packaging"*

*Riccardo Cavanna*



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**We combine  
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to create the  
future.**

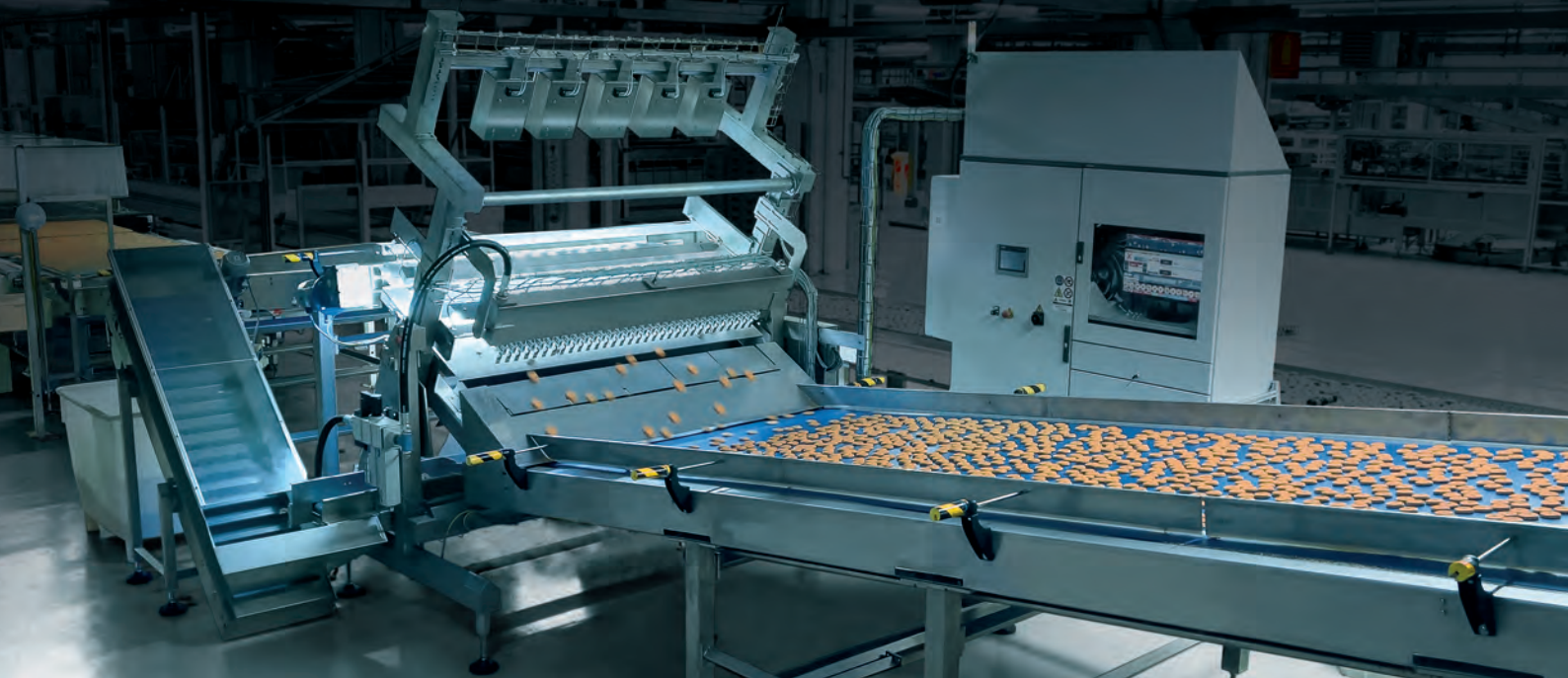






# SENSURE

INNOVATION IN COMPUTER VISION

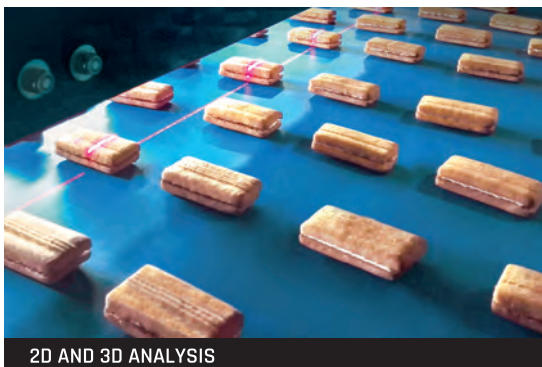


## Vision inspection systems for food products quality control, automatic rejection and data analysis

- **Baked products** (biscuits, cookies, crackers, breads, pizzas, cakes, donuts, etc.)
- **Snack and confectionery** (snack bars, pretzels, desserts, pastries, chocolates, candies, etc.)
- **Meat and poultry** (raw, breaded, grilled, patties, etc.)
- **Seafood products**
- **Fruit and vegetables**
- **Cheese products**



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2D AND 3D ANALYSIS



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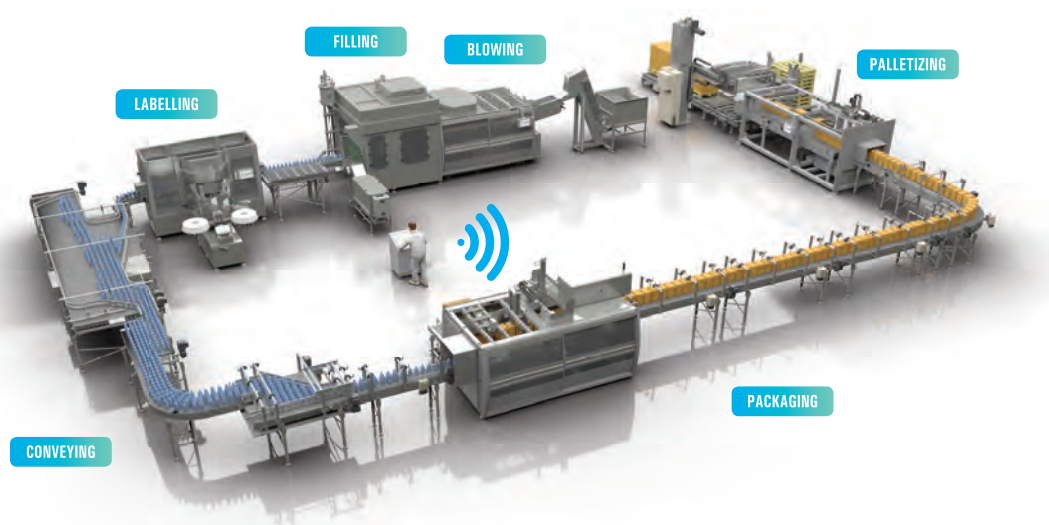
# DESIGN WITH US YOUR CIRCULAR PACKAGING



IMPROVING YOUR PRODUCTION  
EFFICIENCY AND REDUCING  
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IS EASY WITH SMI!

Our bottling and packaging  
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process recyclable materials  
such as rPET and allows for  
considerable energy savings.

Find out our solutions for  
packing a wide range of  
containers up to 36,800  
bottles/hour.



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**BOTTLING**



**CANTINA SANTADI**

HISTORY, TERRITORY, CULTURE, TASTE  
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SONIA V. MAFFIZZONI  
*Editorial Manager*

A changing market that poses new challenges everyday: this is the context that we're working with and that we have to adapt to.

How? In undefined scenarios it's important to orient oneself and move forward with awareness. To do this, food processing companies can rely on collaboration and on the creation of networks, two key elements of business which are certainly not to be taken for granted. The reason is simple: this is the only way for a company to explore vital concepts like new technologies, innovation, and market opportunities. Now more than ever before, skills and corporate vision are what lead to success. Challenging moments help us to get things in order. And order there is.





AMONG OUR COMPANY'S TOP PRODUCTS ARE  
AUTOMATIC AND MANUAL PEELINGS.  
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for food and beverage industry**

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# NEW STANDARDS, NEW TECHNOLOGY

In the recent years we entered the era of sustainable packaging. New procedures and technologies help our market to raise its standards and as packaging machinery designer and builder we implemented new instruments to face new challenges. The need for flexibility, traceability, sustainability and

attention for consumers gave us the opportunity to improve our offer.

### Simple and hygienic

Universal Pack machines are built to guarantee the highest hygienic level in the simplest manner. The R&D department has designed and developed automatic CIP systems for cleaning the

inner parts of dosing systems.

As a matter of fact, these systems ensure the full equipment cleaning without the need for disassembling. These solutions are aimed to reduce machine downtime by providing ready-to-work spare units. All cleaning systems are designed and built abiding by EHEDG





guidelines and 3-A sanitary standard.

The next hygienic level available implies Ultraclean technology, equipped with laminar flow to prevent contamination of the product area by isolating the dosing and forming groups from the external environment. The hygienic proposal is also extended to the packaging: decontamination and sterilization lamps ensure the highest hygienic level of the laminated film.

#### **Traceability and certifications**

We uniquely code every single component, keep full track of it and pro-

vide documentation certifying its compliance with Pharmaceutical and Food industry regulations. An essential list includes for instance: certificates of all materials and parts in contact with the product, welding certificates, calibration certificates and parts full traceability. The provision goes beyond the latter certificates for proving the components quality and compliance, as it stretches to further documents concerning the line construction and effectiveness. The list goes on with IQ (Installation qualification), OQ (Operational qualification), PQ (Performance

qualification), FDS (Functional design specifics), HDS (Hardware design specifics) and Risk analysis, FAT and SAT ad hoc protocols.

#### **For the planet**

Our non-stop research in reducing the packaging industry carbon footprint resulted in streamlined machinery design for packing recycled, recyclable and compostable laminates. LCA (life cycle assessment) is used to measure the environmental impact of our products and identify optimal ways to reduce it. It is a 360° analysis that goes







beyond the mere packaging produced and involves every step of the packaging machinery production process. We develop our solutions shoulder-to-shoulder with the main global film suppliers and test them in agreement with major multinational companies in order to provide them with a turnkey solution able to produce eco-packages.

### Universal lab

Over 30 years of scientific research. Our in-house laboratory was built to always ensure the most sustainable and efficient packaging solution. The research in Universal Lab allows us to optimize machine design, efficiency and reliability by studying the most significant properties of products and newly developed laminates. That's why we are ready to pack any product using the latest eco-laminates in the market and always looking out for the development of new materials.

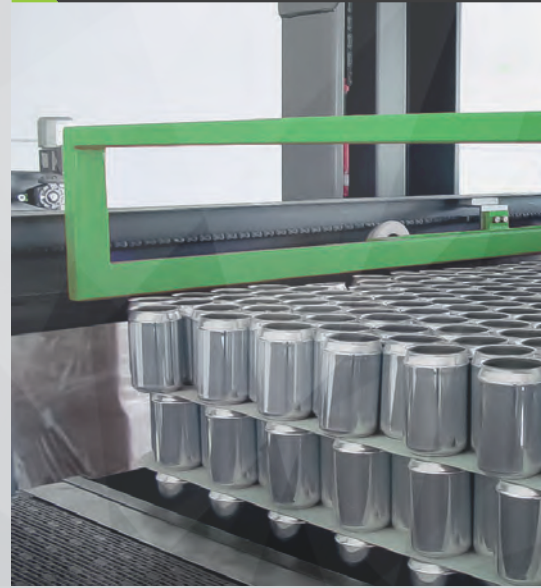
### The company

Universal Pack is an international reference in the field of packaging. The company has over 50 years of experience in designing and building vertical machines and complete automatic lines for packaging single dose products for the food, pharma, chemical and cosmetic industry. It is present in over 150 countries and has installed more than 8000 systems. It offers cutting-edge solutions for any type of package: stick-packs, sachets sealed on all four sides, shaped packs and cartons. 🏢

[www.universalpack.it](http://www.universalpack.it)







Our expertise in a wide range of industries ensures we have the ability to handle your product.

**Duetti Packaging**

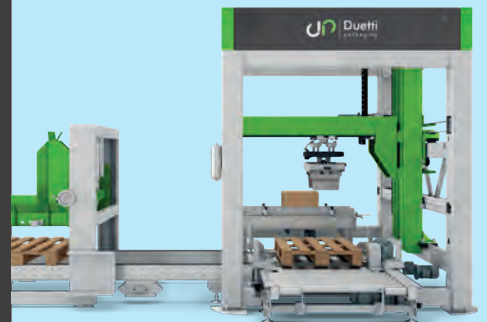
The end-of-line automatic solutions provider



automatic  
**PACKAGING**  
solutions



[duettipackaging.com](http://duettipackaging.com)





# DUETTI PACKAGING designs and produces **END-OF-LINE PACKAGING SYSTEMS**

**F**ounded in the 90s in Galliera Veneta (Padua), Duetti Packaging is a company specialized in the design and production of end of line packaging systems, with a particular focus on the beverage, chemical-pharmaceutical, personal care sectors.

In the last decade, the company has established itself and has increasingly taken a leading role in the Italian and foreign packaging market, thanks to a constant study of progressively innovative solutions. Duetti Packaging is also part of a group and a network of spe-

cialized companies that share resources, skills and objectives and operate in an integrated and organic way.

Duetti Packaging relies on many years of experience in the beverage and canning industry, investing in technological development in each department: from electronics to electromechanics, from mechanics to programming. This has allowed Duetti Packaging to present itself with innovative solutions in the field of secondary packaging automation. The range of products has been suitably configured to offer the best solution

to the customer's production needs. Duetti Packaging solutions include: depalletizers; form and close cartons; pick & place cartoning, with pickers, robotic, all in one unit (form-insert-close), wrap around; traditional and robotic palletizers; turnkey solutions. In addition to these solutions, we provide carton divider inserters, stretchwrappers and other fitting devices for production line.

One of the pillars of the philosophy of Duetti Packaging is the continuous innovation to keep up with the evolution of packaging, which requires a rapid







# Duetti

packaging



of the bottles lying on the cardboard, maintaining the organoleptic qualities of the wine. A second example of an advanced and innovative cartoning system has been designed and produced for a well-known brand of bitter, whose bottle has a triangular shape. The system consists of a screw for the advancement of spaced bottles, a series of servo motors for the automatic adjustment of the grip format and, a pneumatic system of rotation of bottles. The future is focused on promoting the modularity of the machines, creating customized solutions but also standard ones, based on the increasingly demands of the market and therefore of customer, always ensuring the quality of production and services. Duetti Packaging operates with Industry 4.0 standards and is ISO 9001 certified. 🏢

and constant study to be able to safely handle the most varied types of packaging.

Specifically, for the beverage industry we realize depalletizers, able to pick up empty containers and to start them to fill,

built and configured according to product specifications and production needs.

For the cartoning instead, in particular for wine bottles, the company has developed and patented the "Tete Beche" system, which allows the positioning

[www.duettipackaging.com](http://www.duettipackaging.com)



## “ RESEARCH INTO SUSTAINABLE PACKAGING: THOUSANDS OF WAYS TO REPLACE PLASTIC ”

Sustainability – as a corporate value, driven by consumer awareness and the need to preserve planetary resources – has become a topical trend for companies in all areas of business, engaged in researching innovative solutions. The food and beverage industry is no exception and has come up with a number of possible solutions aimed at reducing the use of plastic.



by Elisa Crotti

**S**ustainability as a business philosophy also embraces the world of packaging, where the great challenge lies in replacing plastics, whose characteristics and properties are difficult to match in other materials. The research laboratories of leading international companies are therefore presenting and perfecting innovative, if not ground-breaking solutions, which have been presented at Anuga FoodTec 2022 in Cologne.

Driven by growing market pressure and consumer awareness, the food and beverage industry is orienting its packaging choices towards renewable raw materials and recyclable materials, leading them to replace traditional packaging with more contemporary solutions.

Many producers are attentively evaluating the possibility to replace plastic, in favour of renewable fibres or alternative materials. It goes without saying that across-the-board solutions do not exist; quite the contrary, each proposal needs to be adapted according to the philosophy “a container for every content”.

In this case, more than ever before, personalization is the keyword.







Wherever possible, composite films or plastic trays are being replaced by mono film or cardboard. This requires new generation modular machines, based on intelligent robotics and automation, to process both traditional and new sustainable packaging.

Some solutions are already available on the market and there are companies which, showing a high degree of flexibility, have been able to offer avant-garde solutions, for instance in the ambit of sparkling beverages and beer, where films and plastic rings have been replaced by cardboard alternatives, and these are processed without causing delays in productivity or poorer performances. Then there are the flowpackers which process both conventional composite films, with hot-cold sealing, and recyclable or paper-based films.

Here the key challenges consist in maintaining the efficiency levels of the machines, since it is certainly more complex to work with paper-based film: paper is more susceptible to tearing and wrinkling; it is stiffer and requires special attention during processing to prevent stoppages.

Furthermore, it is abrasive and may therefore damage the mechanical parts of the machine in the long term. For these reasons, the latest generation flowpackers must be designed to handle such criticalities, perhaps by contemplating more resistant or protected surfaces.

Another aspect of great significance regards the contact with foodstuffs: the more complex and perishable the food, the more difficult it is to find valid alternatives to plastic, which must be researched in the ambit of bio-active materials. In this case, one strategy consists in covering the paper utilized with safe waxes and natural proteins, and with organic-based additives.

Some interesting results have emerged: on one hand, the proteins act as a barrier against oxygen, and the waxes against vapour, which prevents such foods as fruit from losing too much moisture.

On the other hand, organic-based additives perform an antioxidant and antimicrobial action, which improves the preservation and shelf life of the food product. None of which prevents the paper from being collected and recycled after use.

Since sustainability is based on the 3Rs, Reduce, Reutilize and Recycle, another critical aspect is that of reducing consumption. The various solutions are aimed at reducing the quantity of plastic, whenever it is not possible to identify a substitute.

Also in this respect, much has been accomplished: thanks to structural innovation, we have succeeded in using from 15 to 40% less plastic for the packaging of tomatoes, berry fruits and stone fruits. After use, these containers may be collected for recycling, destined to become raw materials for further utilizations.

The principle governing this rising trend is that of the circular economy: the circular economy is a generic term used to define an economy that is designed to be regenerative. It is an economic system planned in such a way as to reutilize materials in subsequent production cycles, to minimize waste.

To all effects and purposes, this is one of the keys to sustainability



# LALA MEXICO: tastiness and authenticity in practical packages

**L**ala, leader in Mexico for the production of high-quality dairy products, has become a large and global company, starting from small, but significant details that have been appreciated by many consumers.

For breakfast, lunch, dinner or any other occasion, Lala's mission has always been "Nurturing everyone's life", producing high-quality fresh and natural products to be enjoyed at any time of the day.

The Mexican company, that has over 65-years-experience in the production and marketing of a wide range of milk beverages, continues growing and

keeping these principles alive thanks to innovative solutions that take care of the consumer's well-being.

Starting from these considerations, Lala has recently turned to **SMI** for the installation of the **sixth shrink wrapper from the SK ERGON range** for the secondary packaging of 0.25 L HDPE bottles of **Lala Yoghurt Bebible** products in bundles in shrink film.

The partnership between SMI and Lala companies, which began in 2007, was strengthened with the arrival of the new **SK 600F ERGON** and **conveyors**.

### Strategic partnership with suppliers of hi-tech packaging solutions

Several lines for the production and packaging of a wide variety of company brands in several pack types and







configurations are currently installed in the 29 plants of Grupo Lala.

The continuous cooperation between the company and its suppliers is essential for the business success in order to meet the growing market requirements. Within an environmental sustainable industrial approach, Lala has been investing in **cutting-edge production technologies to improve the plants and reduce the energy consumption** and the carbon footprint of its activity.

Among the most recent acquisitions in this sense, are the secondary packaging machines supplied by SMI, which use innovative design solutions in an IoT (Internet of Things) key and ensure high levels of efficiency and productivity of the plant. The Mexican company decided to install a new SMI packaging machine from the **SK ERGON series**, in the new production line of Yoghurt Bebible, the supply also includes **conveyor belts for loose products** entering the shrinkwrapper and **conveyor belts for packed products** at the outfeed. Thanks to quick and simple format changeover operations, the system supplied by SMI, allows Lala to pack

0.25 L HDPE containers, filled with yoghurt of various flavors, in various pack configurations, passing from one production to another in a short time. The SK ERGON series shrinkwrapper, is an extremely flexible hi-tech solution, for packaging small containers, in bundles of 6 pieces (3x2 format film only) or in larger formats of 24 pieces (6x4 pack); in fact, this machine adapts quickly and easily to the company's production program, which is subject to frequent changes based on market demands.

#### **SK 600F ERGON shrinkwrapper - production up to 60 packs / minute**

**Containers packed:** 0.25L HDPE bottles of different flavours of yoghurt

**Packs created:** packs in film only in 6x4, 4x2 and 3x2 formats in win lane

#### **Main advantages:**

- Automatic packaging machine suitable for packing products in various pack configurations in film only
- Quick and easy format changeover to switch from one production to another in a short time
- Compact and ergonomic structure

- Maintenance, energy loss and noise reduced to a minimum, thanks to the motors connected directly to the transmission axis
- Machine equipped with guides, sides and winder optimized for processing small 0.25 L HDPE bottles
- Optional device to process 3x2 packs film only in twin lane

#### **CONVEYORS**

**Function:** transport of loose containers at the infeed of the SK 600F ERGON shrinkwrapper and transport of bundles at the machine outfeed

#### **Main advantages:**

- Smooth, fluid handling of loose products and packs leaving the shrinkwrapper
- Simplified maintenance operations
- Simple and intuitive man-machine interface
- Format changeover times reduced to a minimum for the swift transition from one production to another

For more information on SMI, visit the website. 

[www.smigroup.it](http://www.smigroup.it)



## The foreseeable market evolution for HDPE CONTAINERS

**T**he market for HDPE liquid containers was born in the 50's, it has grown continuously, and it became a "high commodity" product with a low contribution margin: it is used on a large scale in all Countries of the World to pack "non-beverage" liquids, which remain largely within PET segment.

During these seventy years of life, technological progress and consumer needs have contributed to change production processes, making them more reliable, more efficient and faster.

It is therefore legitimate to ask what the foreseeable evolution of these products could be, in the light of the circular economy that commits the industry to an exercise of "think differ-

ent" as fascinating as it is complex.

The raw material is widely available and the recyclability processes to create new resin (PCR) are consolidated: a new generation of machines is needed that can use very high percentages of PCR, in mono or multi-layer version.

Design and marketing play a non-secondary role in the ecological transition that is required: the weight of the containers must continue to decrease, the number of colors used must be reduced to promote recyclability, while rapid colors changeover became a

must for the extrusion heads.

The new generation machines will have scalable solutions for the extrusion process, in a way to allow the use of bio-compostable and / or biodegradable materials: these materials are available, but still in limited quantities and at relatively high costs.

On this topic it is worth mentioning a recent Market Survey, which highlighted the willingness of consumers belonging to the "baby boomer" and "Z" generations to pay a higher figure for a product that is presented in "eco-friendly" bottles.





# Best seller 2020-2021 AlphaMAC



## ACCESSIBILITY AND SAFETY

Optimized design for a greater accessibility from both sides, with easier and safer mold changing and maintenance operations.

## COMPACTNESS

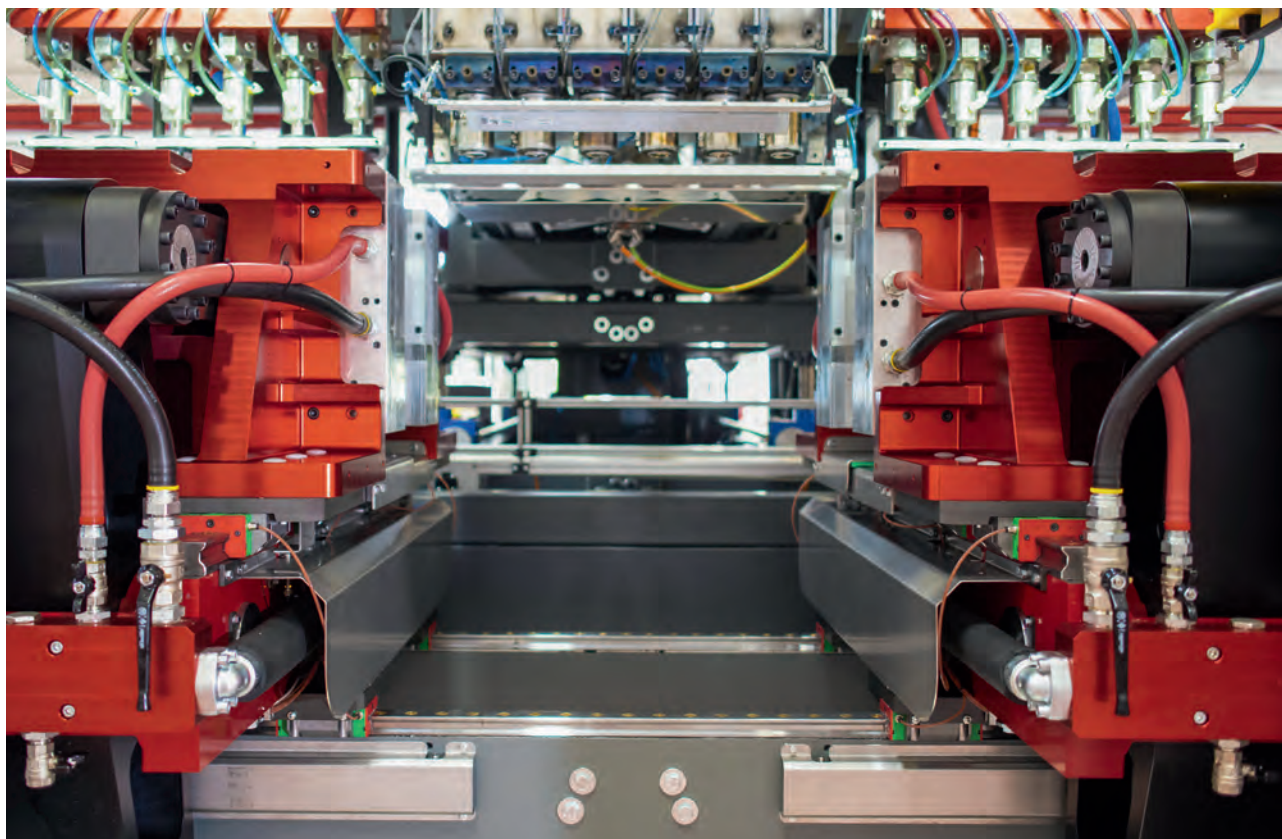
Compact floor occupation with just 2,2x4,6 meters in the 600 mm stroke version.

## MAINTENANCE

Alpha ZERO is almost maintenance free due to the absence of bobbing and the centralized lubrication.

 **ZERO**  
alphaMAC

[www.alphamac.it](http://www.alphamac.it)



Returning to the topic of blow moulding extrusion machines, it is absolutely necessary to reduce energy consumption: a statistical census of the existing machinery fleet on the Western market has revealed that it consists of more than 73% of hydraulic motion machines.

The transition to electric machines is worth a direct energy saving of over 35% and overall indirect, including the costs of utilities and maintenance, of over 55%: this is one of the mile-


stones for the application of the concept of circular economy to this technology.

Not only, the accurate management of the downstream of blow moulding extrusion machines, the drastic reduction of personnel related to the final packaging of the bottles, the degree of automation and traceability of the product are other elements of challenge and cost reduction of HDPE bottles.

At this point, the circular economy, the

ecological transition and the Industry 4.0 concept meet, in order to generate innovative production processes, with plants including low labor intensity, low energy consumption and high efficiency, fully interconnected, resulting in competitive TCO.

This scenario, compatible with the general evolution of the modern world, requires economic investments, technological research and, most importantly, the commitment of companies to achieve the set goal, otherwise their competitiveness will be significantly reduced.

Alphamac, as a company belonging to the IMA Group, one of the world leaders in the packaging machinery industry, has been following these guidelines and it offers to the market machines and complete solutions that cover the needs dictated by this further step forward of a fascinating technology and that, born seventy years ago, still finds its valid place in the world of packaging for fluid products. 

[www.alphamac.it](http://www.alphamac.it)







# INDUSTRIAL LABELLING MACHINERY MADE IN ITALY

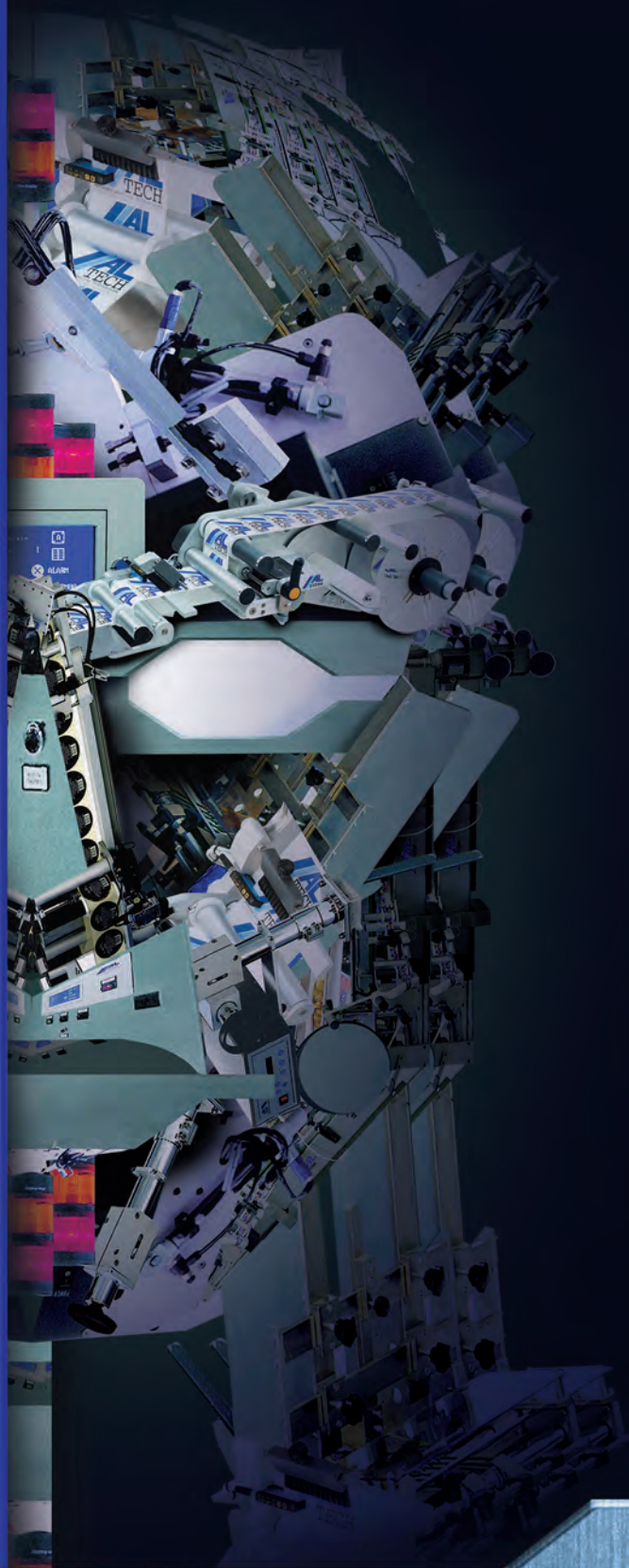


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McCormick Place - Chicago, Illinois  
23- 26 October 2022

**Lakeside Upper Hall, Booth LU-8509**





# ALTECH - Advanced Labelling Technologies

**A**LTECH is one of the major European producers of self-adhesive label applicators for product decoration, coding and identification.

Today, the company distributes its systems all over the Italian territory through a network of direct sales, while the commercial distribution for Europe and overseas takes place in more than 50 countries through a network of 80 qualified resellers and 3 subsidiary companies in the United Kingdom, the United States and South America.

### **Its range encompasses the following products:**

**ALstep** – low-cost applicator featuring modular and flexible configuration.

**ALritma** - high-performance label applicator, which can be easily integrated in packaging lines. It is also available with thermal transfer printing.



**ALbelt**  
Top & bottom labelling machine



**ALcode**  
Print & apply label applicator



ting group in the ALritmaT version, for print/apply applications.

**ALcode** – real-time print-apply systems which apply labels immediately after printing, in any position, on both stationary and moving products (even at high speeds).

A specific pallet labeling version, ALcode P, is able to print and apply A5 format labels on two consecutive sides of a pallet (normally front and side, per EAN 128, or even three sides on request).


**ALbelt** - simplified linear system which is open, compact, and particularly economical. It can be configured for wraparound, c-wrap, top, bottom, top and bottom, top and side labeling

of various products, cylindrical or flat. It's ideal for labeling cases, boxes, trays, jars and cans.

Its simple and solid main structure houses a conveyor and one or more labeling heads (choice of ALstep, ALritma or ALcode model).

**ALline** – complex linear system able to apply self-adhesive labels to a wide range of product shapes, constructed with the most reliable materials and components on the market to offer the highest levels of performance and production.

The modular design incorporates ALstep and/or ALritma heads, and can be configured on the basis of customer requirements, allowing application of

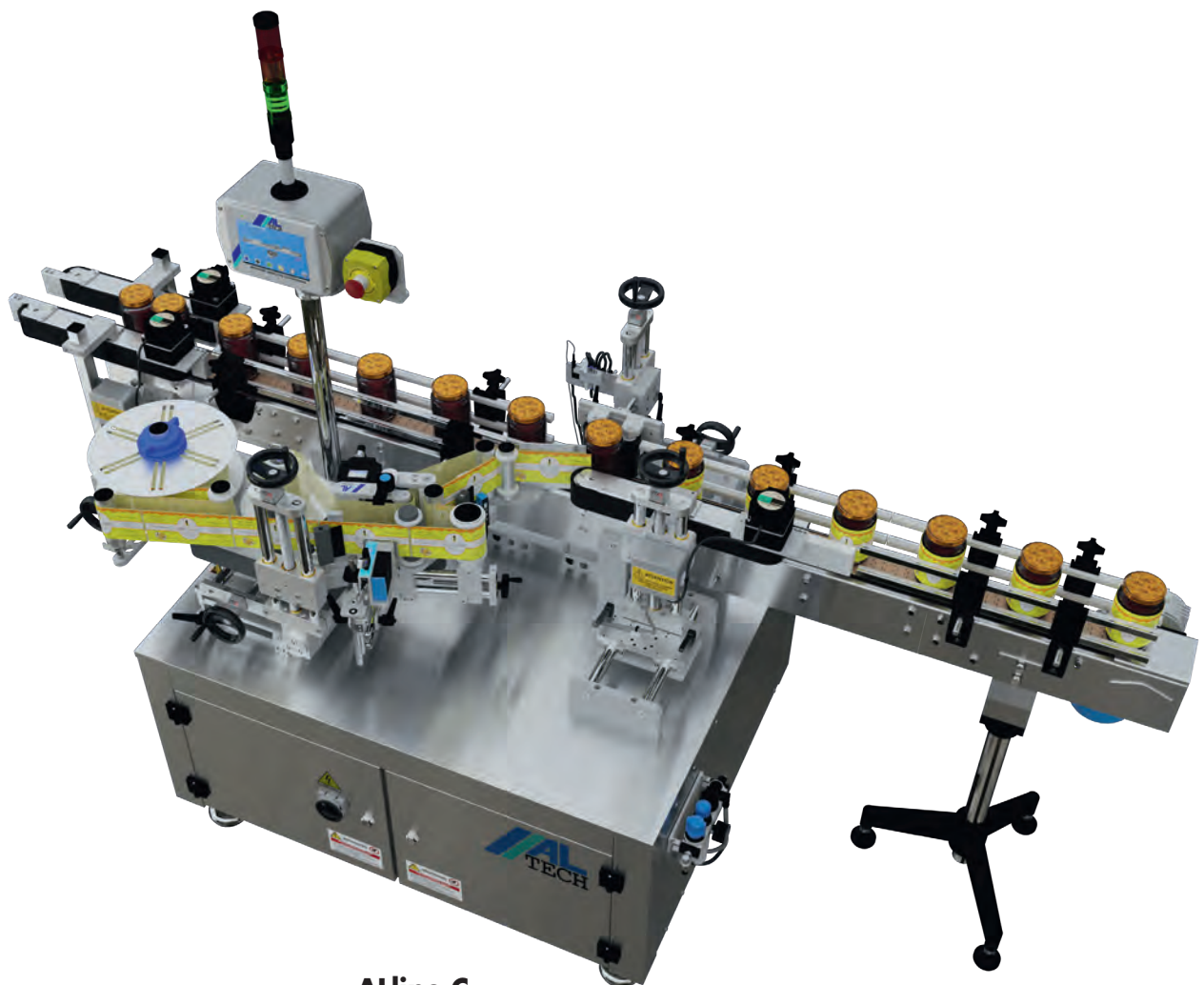
labels of any shape and size for front/back or wrap-around labeling and seal application to food, cosmetics, chemical and pharmaceutical products. 

For further information:

**info@altech.it - www.altech.it**

**sales@altech-us.com**

**www.altech-us.com**



**ALline C**  
**Wraparound labelling**



# How CAMA NORTH AMERICA helps food processors improve efficiency, production and sustainability

**W**hom do food processors in the US turn to when they're looking for secondary packaging systems to improve efficiency, production, and sustainability? Increasingly, the answer is Cama North America. Based in Buffalo Grove, Illinois, Cama North America is a leading supplier of secondary packaging, robotic systems, and integrated packaging solutions for a wide variety of food markets, including Bakery, Confectionery, Coffee, Dairy, Grocery, Ready to Eat Meals, and Pet Food.

Cama North America is a subsidiary of the privately-owned Cama Group, Italy, which is known throughout the world for its cutting-edge technology

and reliable, innovative packaging systems. Cama's BreakThrough Generation (BTG) series of secondary packaging equipment features accessible, sanitary frames; TPM (Total Productive Maintenance); ease of use; Industry 4.0 diagnostics; and industry-leading efficiency.

They also offer advanced rotary and linear servo technology, along with in-house-developed robotics, in order to deliver better flexibility.



By helping food packagers with easy to operate and state-of-the-art cartoners, case packers, sleeving systems, and robotic loading systems, Cama has developed a steady base of repeat customers and helped hundreds of plants solve production, labor, sustainability, and other pain points. Cama North America's ability to provide local engineering, manufacturing and aftermarket services, including technical service,







programming and parts, is also an advantage many customers appreciate.

#### **Improved Production, Efficiency**

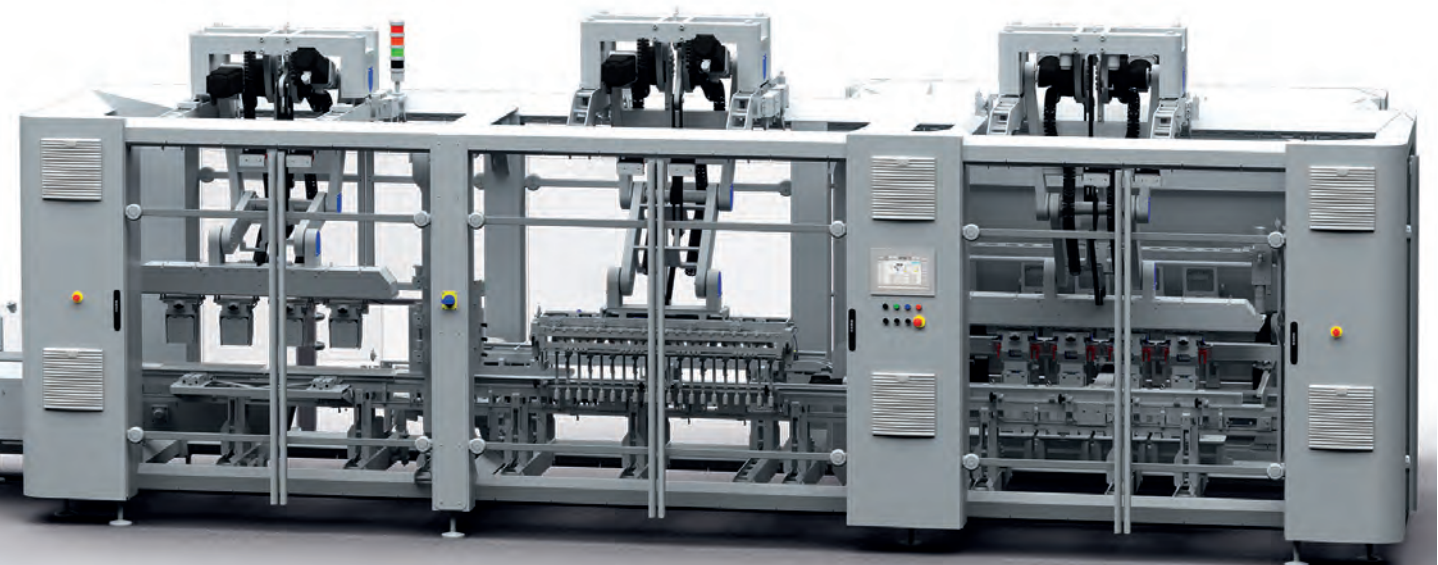
The chance to improve flexibility and efficiency was just part of the reasoning behind one customer's decision to

purchase two Model IF318 robotic loading systems and a Model FW748 wraparound case packer from Cama North America.

For this project, the customer – a Midwest cheese producer – was packing divided trays containing cheese, nuts, dried fruit, etc. They

were challenged with a unique package, complicated pack patterns, and two existing machines that were not performing to their standards.

For the dairy customer, Cama's solution featured a Monoblock design that greatly improved reliability and efficiency. Explains Jim Campbell,





Midwest Regional Sales Manager, "The IF machines feature 2-axis robots that provide forming, loading and sealing in a methodic, controlled environment. This greatly improved their efficiency and offered a more flexible solution that allowed the customer to package 3-, 6- and 8-count trays in a sleeved package.

They also were able to carton and case pack in the same footprint they previously utilized for just one machine completing one operation."

### TPM, AR Technology

The company was so pleased with the installation that they have two more machines on order, which will also include Cama's Augmented Reality (AR) technology. AR provides digital tools to help maximize operator efficiency

and reduce planned and unplanned downtime. In addition to maintenance and spare parts management, AR provides virtual training and remote support.

Cama's sanitary design and TPM focus have led to numerous opportunities in various markets, including bakery, petfood, dairy, and prepared meals.

A US bakery packager, which was previously, using various vendors to process 3,000 cookies per minute into multiple lines, selected Cama's Model IT285 to case pack flow-wrapped cookies into an RSC. For this customer, flexibility, ease of changeover, and the wide range of products the IT285 could handle at high speeds, were key decision factors. Impressed with the top loader's ease of maintenance and operation, not to mention the highest

efficiency on the market, they were so pleased that they returned to Cama a year later to order a second system.

### Improved Sustainability, Material Savings

Finally, for companies looking to improve sustainability, Cama has its own packaging materials department, which lends its decades of experience in the design and testing of packaging paperboard and cardboard in order to achieve the highest efficiency. In many cases our sales engineers can suggest slight modifications to a carton, tray or case design that offer significant material savings while providing stacking strength, displayability and/or additional features required by the end user. 🏠

[www.camagroup.com](http://www.camagroup.com)

### Cama North America

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[cama-US@camagroup.com](mailto:cama-US@camagroup.com)





# 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 HS SLIM adhesive units*



*Cold glue stations*



*Roll-Feed stations*



*Example of configuration with Roll-Feed stations*



*Hot-melt stations*



*Adhesive stations (SLIM)*



*Example of configuration with cold glue stations*

**makro**  
labelling

**Makro Labelling srl**  
Via S. Giovanna d'Arco, 9 - 46044 Goito (MN) - Italia  
Tel.: + 39 0376 1872203 - Fax: +39 0376 1872197  
info@makrolabelling.it - www.makrolabelling.it





# MAKRO LABELLING: technology in evolution on the small and large scale

**M**odularity, 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 wellorganised 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 ser-

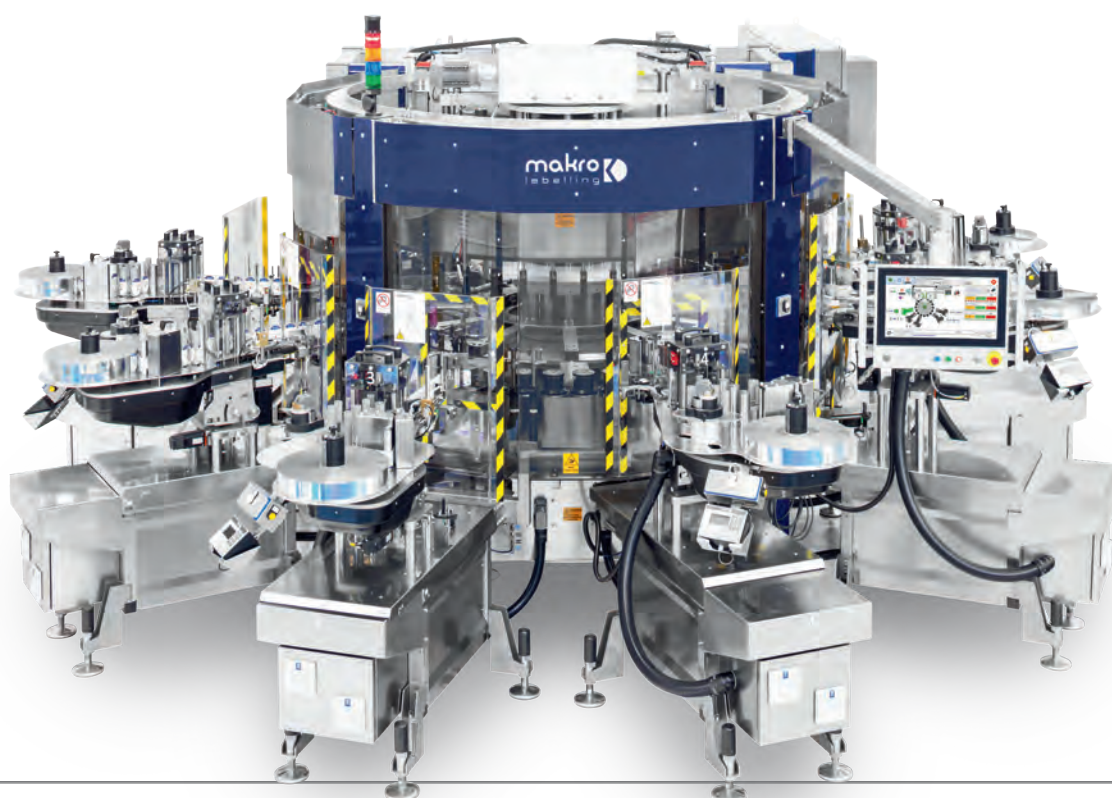
vice guarantee satisfaction of every labelling need and constant expansion on all the most important international markets.

### **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-







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. 🏠

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:

[www.makrolabelling.it](http://www.makrolabelling.it)

**makro**<sup>®</sup>  
labelling



**FOOD**  
processing



# SMART VISION INSPECTION SYSTEMS for food products quality control, automatic rejection and data analysis

**S**ENSURE, a company based in Italy, has been designing and developing, since 2007, vision inspection systems with artificial intelligence which work in self-learning.

With SENSURE solutions it is possible to automate the process for the quality control of food products with the rejection, when required, of the non-compliant ones. SENSURE systems can also be used to optimize the pick & place activity, sending the products gripping coordinates to Robot and PLC communicating also quality information for the automatic sorting. All SENSURE solutions allow real-time display and monitoring of measured values and collect the data of all production, supporting

the continuous process improvement activity.

SENSURE STARGATE is the family of products developed by SENSURE which maintain the entire process under control, increase line productivity, and reduce operating costs for Customers in different industries with highly variable products (bakery, snacks & confectionary, meat & poultry, seafood, etc.). The core of the STARGATE family of products is the SENSURE SYNAPSE software, with thanks to artificial intelligence and self-learning, guarantees the best quality control. AI makes up the core of the system and enables it to perform various functions such as the automatic selection of the features to be controlled in the products, and the

optimization of the tolerances for the controlled measurements.

SENSURE SYNAPSE can measure and control numerous product features, such as shape, size, colour, and surface pattern using 2D technology (industrial cameras) and perform a full 3D product profile using 3D technology (laser profilometers). With SENSURE SYNAPSE all the measurements are reliable, repeatable, and accurate also at high speed (up to 200 products per second).

### STARGATE-Series solutions

SENSURE vision inspection solutions (STARGATE series) control a specific production process step (mixing, forming, proofing, decorating, baking,





packaging, etc.) along the whole production line.

SENSURE STARGATE vision inspection systems, all supplied with the innovative SENSURE SYNAPSE software, can have two different configurations:

**1. STARGATE SL (Single Line)** -

Solutions for the quality control of products on single row (conveyor width up to 0,4m/15").

**2. STARGATE ML (Multi Line)**

- Solutions for the quality control of products on multi rows (conveyor width from 0,4m/15" to 4m/170").

Both the SL and ML have a small footprint, standard and modular version, with a rejection system already included, which can fit into tight spaces with minimal modifications to existing conveyors (STARGATE SL-C and STARGATE ML-C).

Both the SL and ML solutions can also be easily integrated IN-LINE (even already existing) equipped with a rejection module to automatically remove non-compliant products or they can be installed OVER-LINE on existing conveyors and used for continuous measurements of products (Bolt in place, plug it in and ready to use). An OVER-LINE solution is easy to install and operate and can be up in running very quickly: thanks to these solutions is possible to know more about products compared to manual methods and it is possible to make quick decisions and adjustments to the production line using the analysis data.

The IN-LINE and OVER-LINE vision systems provide continuous and quantitative data which can be used to identify process issues, make realtime changes, and create a library of information for analysis.

The SENSURE STARGATE can be tailored to suit the specific application and production line, with the configuration options of the number of cameras, type of mounting frame, rejection mechanism (air nozzles, traps, retractable belts, pushers, etc.), etc.



# SENSURE

INNOVATION IN COMPUTER VISION



The STARGATE-series solutions are designed to be quickly installed into any new or existing production line, can be fully food grade and ready for harsh wash-down environment. The systems have also the possibility of exchanging signals and information with conveyors/machines/systems in the line.

Additional conveyors before or after the system can be designed and installed by SENSURE to make the overall solution a perfect fit. 🏠

Visit:

**[www.sensure.it/en](http://www.sensure.it/en) and  
contact us at [sales@ensure.it](mailto:sales@ensure.it)**

## “ENERGY CONSUMPTION IN MEAT PROCESSING: LESS IS MORE”

Energy efficiency in meat production and processing is a key junction towards sustainability. There's no shortage of solutions and, from government to business, the goal is ecologically oriented production.

**T**he meat sector is under intense public scrutiny and is one of the crucial junctions in the movement towards sustainability in the food industry. Animal health and welfare, the production of CO<sub>2</sub>, and, above all, energy consumption are all being looked at under a magnifying glass. When it comes to the last of these, there are numerous opportunities for optimisation and the investments are significant.

In fact, the European Union is promoting efforts to improve energy management, for example through projects like ICCEE (Improving Cold Chain Energy Efficiency).

The objective of the project is, as its name suggests, to improve the efficiency of the entire cold chain of the food and beverage sector for small and medium-sized enterprises.

But there are many more aspects that need to be looked at.



by Elisa Crotti

The topic of energy efficiency in the meat industry will, therefore, also be a focus of IFFA, the primary international trade show for meat technology and alternative proteins, which will take place in Frankfurt from 14-19 May.

### **Meat: a High Energy Consumption Sector**

The meat processing industry is an energy intensive sector. The heating and cooling processes of the foods also





ne require an enormous amount of energy. Refrigeration is necessary to keep the meat cold in order to ensure, among other things, food safety. Heat is necessary to cook, steam, sterilize, and clean. This last operation is one that also involves a generous expenditure of water.

### **Solutions? Yes, please.**

Many solutions for making the food sector in general, and the meat sector in particular, more energy efficient are being studied. For example, solutions involving refrigeration and extremely energy efficient heat pumps could redefine the energy consumption of heating and cooling, reducing it by up to 70%.

Even waste heat, which would otherwise be left to dissipate, can be reused and deviated to other processes like the heating of water and brine, drying, cooking, searing, pickling, pasteurisation, sterilisation, dehydration, and cleaning.

In terms of refrigeration, getting back to tangible examples for guaranteeing a sustainable cold chain, cooling systems based on compressors are used to create optimal thermal production environments, not just for the food itself, but also for storage and distribution areas. Savings can also be obtained through modern drive technologies, like servomotors. Energy efficient drives that control frequency make it possible to cut energy consumption by 25% and to reduce spikes in activation and switching energy. Furthermore, motors are cooled with water and therefore offer the possibility of directly using or recovering heat waste.

Another step towards sustainability and energy efficiency is represented by machines with durable components and a modern hygienic design, like soldered and rounded edges and recessed coverings. In addition to being more durable, they have a smaller contact surface for dirt and germs, requiring less water and energy to be cleaned.

When it comes to water consumption for food safety, the motto is. "As much as is needed, as little as possible." To keep water consumption to a minimum, various options must be considered, like the recycling of waste water within companies or water treatment plants for municipal waste water. Innovative monitoring and measuring systems which analyse water consumption and identify parameters for further waste reduction are also extremely helpful.

### **Renewable Energy Sources**

What energy sources are the most indicated for the sector? What solutions should investments focus on? In the first place there's solar thermal energy, in which major investments have been made, followed by heat pumps, biogas, and biomass, as most processes require temperatures below 100-120°C. Finally, cogeneration, electricity, and heat can be efficiently provided by biogas or biomass from residual materials.







# THE **PUMA** MANIFESTO

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







# THE PUMA MANIFESTO

## WHAT IS PUMA?

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

## WHAT IS PACKAGING?

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



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



## WHAT IS NVC?

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

## WHEN IS PACKAGING AN ENVIRONMENTAL ISSUE?

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



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



## WHY DO WE HAVE TO ACT NOW?

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

## ABOUT THE MANIFESTO

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



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





# THE PUMA MODEL

## THE VOCABULARY

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



*Holistic innovation is needed as we are all interconnected in packaging*



## ADDRESSING THE ENVIRONMENTAL ISSUES

Environmental issues may come and go, depending on the many different interactions between our human activity and planet earth. Whereas the PUMA model remains unchanged, its application to environmental issues may vary in the course of time. In this first edition of the PUMA Manifesto we focus on litter, CO<sub>2</sub>, and (inadequate) pack optimisation. These three issues are deemed to be the most important in the current environmental packaging debate. The resulting table serves as the basis for addressing (future) environmental issues adequately.



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

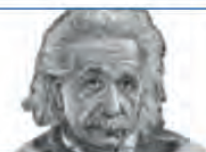




# SUPPORTING PUMA



*Success comes from deeper understanding and supplementing earlier insights*



## I SUPPORT THE PUMA MANIFESTO AND HEREBY PLEDGE TO:

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



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



## MY DETAILS:

Company name

Initials and surname

Date of birth

Address

Phone

E-mail

**For an overview of recent references and background information worldwide please visit [www.nvc.nl/puma](http://www.nvc.nl/puma)**





# Flow wrap packaging: the most with the least

**I**s there a future for the flowpack? It is from this question that the white paper “Flow wrap packaging: the most with the least. High protection, low impact” starts. It’s a technical-scientific publication done by the researchers of the Politecnico di Torino **Beatrice Lerma** and **Doriana Dal Palù**.

**Riccardo Cavanna**, the future president of UCIMA for the period 2022/2024, had the intuition that set the project in motion.

“The idea came to me while visiting a recycling center” he explained. “I realized that starting from the bottom, it was possible to think about sustainability in a different way, not only

looking at the life cycle of the product but also rethinking it from a scientific and historical-cultural point of view. It is from here that I understood that, as a packaging industry, we had to go through the history of this wonderful package by looking at it from multiple points of view”.

The first official presentation of the white paper was held during **Ipack-Ima**, an international trade fair specializing in packaging and processing, at the presence of over 120 participants.

A round table, moderated by journalist **Luca Maria De Nardo**, was done with several relators: **Luca Ruini** (CONAI President), **Profes-**

**sor Paola Scarfato** (Industrial Engineering Department of the Università di Salerno), **Mario Molinaro** (Business Director Flexible Packaging EU of Taghleef), **Alberto Palaveri** (Giflex President), and **Mario Cerutti** (Lavazza’s Chief Institutional Relations & Sustainability Officer) and **Domenico Brisigotti** (Coop food sales director) also finally **Riccardo Cavanna**.

“This publication -said the two curators -represents the first result of a research activity that investigates, in a broad sense, the relationship between flow-pack and sustainability. The research work of the group of the Politecnico di Torino, which also saw the involvement of Dr. Ottavia Burello, represents







the different players involved in the entire flowpack supply chain and the different functions and complexity of this type of flexible packaging.


The university has been a bridge between the world of business and the academic one, fostering mutual dia-

logue and focusing on possible critical issues to be reported to the world of political decision-makers and the overall supply chain".

In this sense, the white paper represents the first step on a path that aims to continue over time, expand the

network of collaborations and contributions to become a vademecum on everything related to the flowpack universe.

After the first official appointment, the publication is now ready to fly to **Chicago**, where **Pack Expo**, the most famous packaging fair on the American continent, is **scheduled from 23 to 26 October**. Here the second presentation of the white paper will be held in the presence of exceptional guests and testimonials.

To stay updated on this project and to download the publication, visit the website. 

[www.flowpack.it/flowpack\\_en](http://www.flowpack.it/flowpack_en)



**Flow Wrap  
Packaging**

## “ PACKAGING AND SUSTAINABILITY IN THE MEAT INDUSTRY ”

With consumer attention highly focused on sustainability and energy efficiency, meat producers rise to the challenge by implementing innovative technologies and solutions. Starting with packaging.



**W**hile sustainability has become a mantra of industry in every sector, when it comes to meat the focus is particularly high. In fact, meat consumption is strongly influenced by the choices made by consumers, who today are increasingly concerned about – and aware of – environmental issues related to this sector. Its impact on the greenhouse effect is irrefutable: in Germany alone, 42.7 million tons of CO<sub>2</sub> per year can be attributed to meat consumption, and more than 60 trillion litres of water are necessary for its production and for the breeding of livestock. Not all meats are equal: the average water footprint per calorie is particularly high for beef and approximately twenty times higher than that of grains, with estimates that mention water savings of between 11% and 35% in the case of diets that include a low consumption of meat.

Aware of this, companies in the sector are responding with a strong commitment to sustainability and technological innovation, which is aimed at protecting the environment, as well as the health and welfare of ani-



by Elisa Crotti

mals. This last is an increasingly pressing aspect if one considers that, according to a Eurobarometer survey conducted in April 2021, approximately one third of Europeans are purchasing and eating less meat and 16% take into account the ecological footprint of their food when they do their shopping, thereby adapting their choices.

It's no coincidence that meat substitutes made with vegetable proteins, as well as vegan and vegetarian alternatives, are experiencing a true boom and reflect a trend towards sustainable foods that respect animals.





### **Government That Supports the Consumer**

The discussion regarding more sustainable food production is also promoted by political needs. In its "Green Deal", which demands a 55% reduction in greenhouse gases by 2030 with respect to the levels of 1990, the European Union places an obligation on food producers as well, requiring, among other things, greater energy efficiency, less packaging, and the use of innovative and sustainable packaging made with reusable materials.

In light of these social changes and the political framework conditions, numerous processing companies have re-examined their corporate policies, integrating sustainability as a guiding value of their company mission. And while approximately 90% of the emissions from meat production comes directly from the production line or from the animals themselves, companies which transform meat consider it their duty to re-examine their own processes in order to optimise energy and resources, also focusing on a transition towards renewable energy.

### **New Trends in Packaging in Compliance with Safety Standards**

In terms of packaging, it's a fact that many consumers pay attention to the sustainable and environmentally friendly solutions of the products that are on the shelves. This is compounded by the exponential increase in on-line shopping, which excludes direct contact with producers (and thus with their packaging) prior to purchase. Therefore it goes without saying that, today more than ever, the intentions and choices of companies are highly influential.

For consumers, plastic-free and reduced-plastic packaging is a need which, for companies, becomes a true trending topic.

Nevertheless, even with the best of intentions, sustainability must take into account food protection and safety: in the world of packaging, not all materials are equal. Thus, for example, paper composites or packaging made with recycled materials permit greater penetration of oxygen, which can compromise the quality of the product. Solutions exist, for example polymer-based oxygen absorbers, which bond to the residual and penetrating oxygen in the package and whose functional layer is integrated in the multi-layer structure. It's always about finding the perfect balance, thus the enormous importance of research and development.

### **Recyclable or Circular?**

In addition to the topic of recyclability, research focuses on renewable raw materials which fit into the logic of circular economy. Some examples? Algae-based plastic and transparent films made from hemp or cardboard derived from grass. Or even bio-based packaging. These are all excellent alternatives to plastic made from fossil raw materials.

Another trend is intelligent packaging which actively safeguards and protects meat-based products and therefore has a sustainable impact. It keeps temperatures stable, absorbs undesired gases which cause ripening, and prevents germ infestation.

We have many roads, some simple others more complex, before us. But they all go in the same direction: sustainability, sustainability, sustainability. For those company that know how to rise to the challenge.



# PROFESSIONAL BAKING SOLUTIONS

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



**E**stablished 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



# GALILEO

*new edition*

Rotary rack ovens  
for bread and  
pastry products.

Designed both for **craft** and  
**industrial bakeries** specifically  
tested **for heavy non stop**  
baking cycles.





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! 🏠

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bakery • pastry • pizza  
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## “ THE BREAD MAKING INDUSTRY: AMID WAR, A PANDEMIC, AND NEW POSSIBILITIES ”

To overcome the difficulties brought about by the pandemic and the war in Ukraine, the bread making industry has had to rethink its methods, resulting in innovation and change.



Over the past two years the world has witnessed a series of worldwide transformations that, without exaggeration, could be defined as epic, given the way that they've profoundly affected the lives of billions of people, their way of thinking, and consequently their way of seeing the world. The Covid-19 pandemic, followed by the war in Ukraine, have brought relevant, but latent, topics to the forefront of public debate, topics such as climate change. Other closely related issues, like that regarding the use of plastic, have changed course within just a few short months. Still others, like the interconnection between various production systems, have made themselves strongly felt in our daily lives for the first time in years.



by **Cabriele De Luca**

We've long heard talk about globalization, the free movement of goods, people, knowledge, and capital, but never before had we so powerfully realized the extent to which this global freedom of movement could become a serious hazard when what's being circulated is a deadly virus. It's impossible, therefore, to come up with local solutions to a crisis that requires a search for global solutions. We've now realized that, in order to function, a world market needs all of its hubs to be working properly and efficiently: no man, nor any production system, is an island.

The topics of ecology, of respect for the environment, and of the need for an unsustainable production system to change its pace, have, in general, asserted themselves forcefully. But at the same time, hygienic-sanitary regulations imposed by measures intended to contain the spread of the virus, have caused new habits and new consumption methods to develop. For instance, the trend which viewed packaging as an enemy to be fought by any means available, encouraging, for example, the purchase of bulk products, was replaced by thoughts regarding the possibility of sustainable packaging, capable of combining hygienic-sanitary needs and ecological needs.

The war in Ukraine, though unrelated to the pandemic which brought the world to its knees in 2020, has further intensified a series of trends that were triggered by COVID-19. The need to address the shortage of natural gas, for example, has forced a profound re-examination of energy sources, industrial production methods, and even personal habits. The freeze on the production of wheat in one of the most important grain production regions in the world has, once again, highlighted the negative aspects of such extreme interdependence between global production systems.

Within this quickly outlined scenario, the bread making industry plays an exemplary role, encapsulating all of the aforementioned issues. The grain crisis has, for example, forced a rapid development in the conversation about the use of alternative flours. But that's not all. The ecological challenge has also encouraged broad debate within the bread making world regarding production technologies, as well as those used for packaging and preservation. The results vary greatly. For example, there's talk of a new wave in baking, which has seen the emergence of more and more young, independent bakers, who have even come together in a movement known as PAU, Panificatori Agricoli Urbani [Urban Agricultural Bakers] and whose motto is "Bread for Change", with a programmatic manifest. Meanwhi-



le, in a more strictly industrial context, a trend that has emerged is that of soft wellness, the tendency to combine the aforementioned search for new, healthier, and more beneficial flours with a specific focus on flavour and sensory gratification. To this end, new consumption habits, also outside of and aside from the changes sparked by the pandemic and the war, have led to further changes in the bread making world, in particular when it comes to the study of long fermentation processes, the use of sourdough starter, and other practices aimed at combining flavour and wellness.

Furthermore, the world of industrial baking is obviously not outside of the debate regarding the use of plastic and packaging in general. There are many new developments taking place within the baking industry: from the study of isothermal containers made out of recycled waste from the fishing industry to flow-pack packaging in paper or recycled materials.

A whole chapter unto itself is dedicated to the world of products created for the bread making industry in order to deal with new consumption habits like, for example, the ever-growing spread of gluten intolerance and forms of celiac disease.

From an ancient art, bread making has today become an industrial sector that's undergoing a profound transformation, rich in innovation and change. In this issue of Food Processing you'll find a partial and temporary, though undoubtedly useful and updated, map which will help you to orient yourself among the most recent developments in the world of bread baking. Are you ready to go?

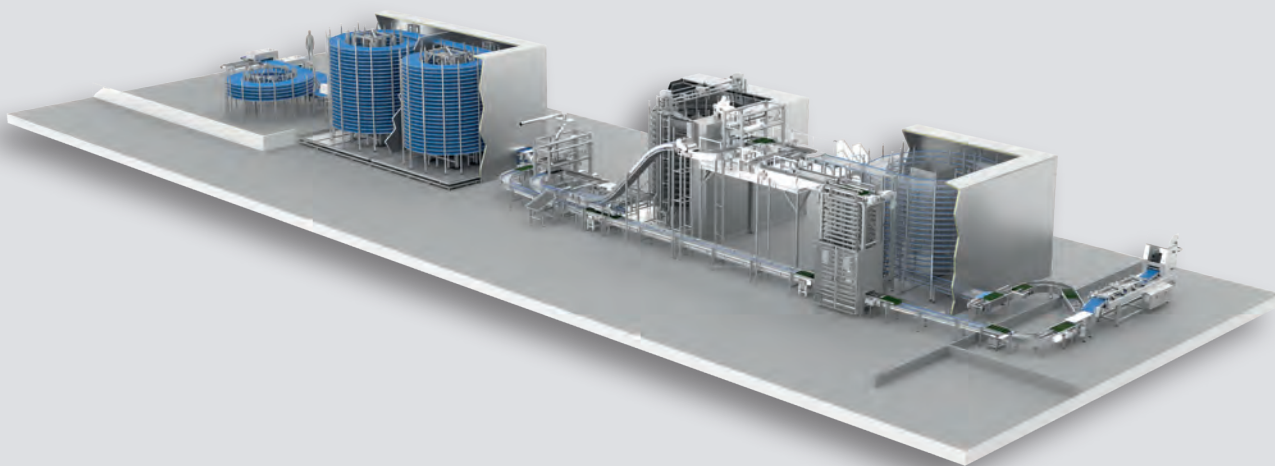




The only limit  
is our customer's

# IMAGINATION

We design, develop and implement innovative and customized solutions for the food processing industry: high-performance systems for your business





# 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



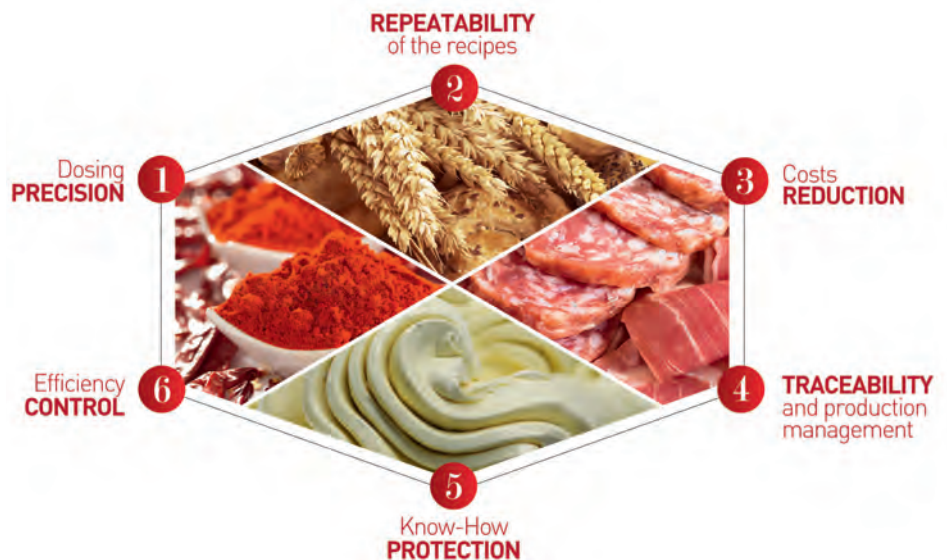


production, the consumption of each single raw material or each single recipe accessing to a protected area.

**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. SUPERSIN-CRO**), 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. 🏭

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**LAWER®**  
dosing & dispensing systems

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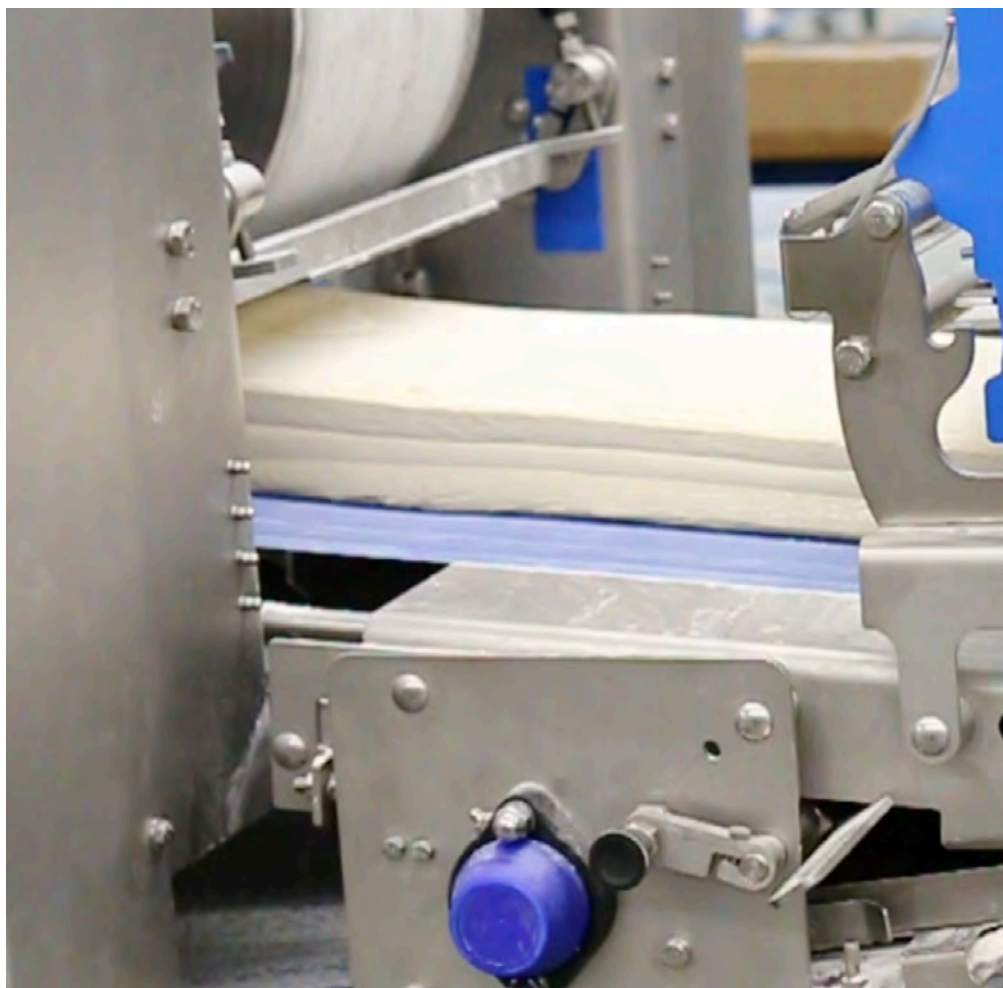
# THE SECRET OF RADEMAKER: CONTINUOUS INNOVATION IN THE RADEMAKER INDUSTRIAL BREAD

**W**hat is the secret of the successful Rademaker Industrial Bread Line?

It is not only the superb quality or the hygienic design of the line. Or its efficient operation, versatility or reliability and robustness. The real secret of Rademaker, a Dutch-based company that develops and provides solutions for the food processing industry all over the world, is that its technologists are continuously working on improving and optimizing the Rademaker Industrial Bread Line, so that customers always have state-of-the-art equipment. Recent innovations include a further improvement in the DSS pre-sheeter to accommodate a larger variety of doughs and an improved dough recycling system. And while the mechanical basis is solid and smart, the true line and process optimization originates in the software that controls the line. Rademaker introduced its first Crusto Bread Line in 2006, to meet customer demands and expand its portfolio of production lines for puff pastries, croissants, pizzas, pies and flatbread. In 2018, the new Rademaker Industrial Bread Line was introduced. Today's market requires an ever-increasing variety of breads, with different dough types, different crumb structures and different sizes. Bakeries, wanting to accommodate the market requirements, in turn ask for modular bread lines that allow for fast changeovers and offering the highest accuracy, while meeting the most stringent hygienic requirements.

## Four components

Contrary to other brands, Rademaker's Industrial Bread Line is based on sheeting technology. A conscious



choice, as this gives bakeries the freedom to handle a wide variety of dough types, from 'green' to pre-fermented and strongly hydrated doughs. The line is capable of generating a wide range of high-quality products that can be produced at capacities from 500 kg up to 6.000 kg of dough per hour. It consists of four major components: pre-sheeting, sheeting, make-up & decorating and dough-recycling.

## Unique pre-sheeting system

Sheeting the dough is essential for the final product. The dough is kneaded

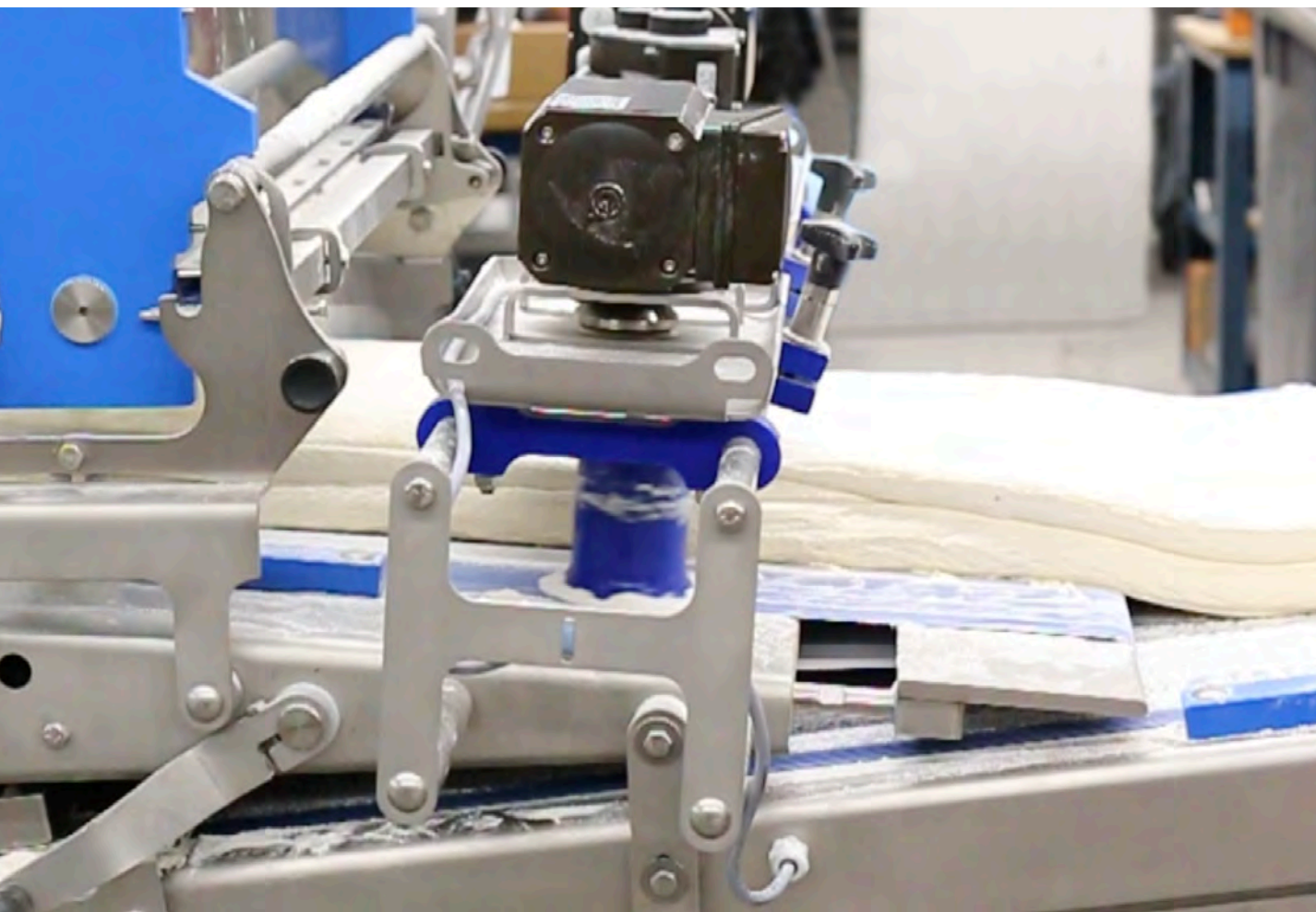
by the mixer and processed in the pre-sheeter. The pre-sheeter transforms dough batches into a continuous dough sheet. Rademaker sets itself apart from its competitors with its proven Double-chunking Sheeting system (DSS), which has been updated to meet the latest requirements.

An innovative dynamic hopper transports the dough in a controlled manner, keeping the shape of the dough chunks linear and constant. Landscape sensors and separate belts carefully guide the chunks in the sheeter, ensuring size and weight accuracy. Chunk



# Rademaker

*Specialists in food processing equipment*



weight and length is exceptionally accurate, leading to a more stable and consistent dough sheet and eventually high-quality baked products.

## **Cost savings and better overall performance**

Many doughs, for instance Italian bread types like ciabatta or focaccia, tend to have a very high water percentage, making it liquid and sticky. In the previous DSS version, oil was used to prevent the dough from sticking to the DSS hopper. Effective as this is, cleaning the line is

a time-consuming issue. Rademaker replaced oil by wax, reducing the required amount by a factor four compared to oil. Cost-savings are considerable and return-on-investment for the wax distribution system is only 1 year. Cleanability is improved due to easily removable parts and because wax is used instead of oil. But maybe even more important, the wax-version of the DSS creates a more consistent chunk volume and a corresponding more consistent dough sheet. This results in a higher accuracy on the final product.

## **Superb dough homogeneity**

Thanks to the minimal transportation height difference in the pre-sheeting system, dough homogeneity and structure are maintained.

The wider belts with advanced flour strewing and optimized waste bins, in combination with a design that meets the most stringent hygienic standards, allow for cleaner working.

Compared to the previous version the new system is easy to operate and better accessible for cleaning.

**Sheeting process**

As part of the sheeting process, the continuous dough sheet created by the DSS is reduced to the required dough thickness. In some of the reduction stations, non-stick upper rollers reduce the dough thickness to the desired thickness, ensuring that dough characteristics remain intact. Depending on the specific customer demands, a further set of stress-free reduction stations and other sheeting options define the sheeting configuration.

**Flexible cutting in make-up & decorating**

The final processing steps take place in the make-up & decorating section of the Rademaker Industrial Bread line. The design upgrade has resulted in a length reduction, a 400 mm wide rework conveyor and an increased hygiene level.

The weighing conveyor was also reduced in length and fixed to the floor for greater stability and higher accuracy. Amongst the various product cutting solutions is a Box Motion Cutter. It offers different cutting processes in one machine and a unique dough sealing solution, sealing the softer dough products and avoiding products from cracking open during baking. Thanks to an ergonomic design, tools can easily be changed from the side, making it easy for the operator.

**Fast products changeovers**

In the molding conveyor, the side guides are repositioned on the lower belt, yielding a better molding performance. A simple, single operator control that allows fast, fool-proof adjustment of the molding table in height and molding degree to ensure fast changeover and product flexibility. The molding conveyor's unique design offers optimal access from both sides, allowing for fast product changeovers, cleaning and maintenance. As with other parts of the Rademaker Industrial Bread Line, the length has been reduced.







### Unparalleled dough recycling

Traditionally, a part of the dough ends up as rework, especially when working with non-rectangular shapes like omega baguettes. With Rademaker's new, in-line dough recycling system, 10 to 40 % of the return dough may be re-used. Side trim and omega trim can be transported back to start of the DSS as small cuts of rework and efficiently re-entered in the process. Client-specific rework dough options can be catered on specific requirements. Thanks to the controlled distribution of rework dough, the recycling process is highly stable and reliable.

### Flexibility and line length

The Rademaker Industrial Bread Line is characterized by its flexibility. There are multiple configuration options and modules which can be exchanged fast and easily. The Rademaker philosophy calls for building functional production lines, as short as possible. With that in mind, line length has been reduced more than two meters compared to the first-generation Bread Line, saving floor space and resulting in a higher output per square meter.

### Hygienic aspects

The Rademaker Industrial Bread Line is designed according to Rademaker Sigma guidelines, directly derived from various high-end requirements from GMA and EHEDG. Standoffs and machine surface are tilted at an angle to allow water to drain easily, to avoid contamination of the product zone and to reduce drying time after cleaning. Food-contact parts are constructed only with approved materials. All surfaces are smooth to help reduce microbiological contamination development. In addition, all parts of the line are designed for wet cleaning.

### Work in progress

The Rademaker Industrial Bread Line is a work in progress, as Rademaker is continuously working on further improving the line, meeting and an-

ticipating new customer demands, market developments and legal requirements. Rademaker thus offers a solution for every industrial bakery, large or small. In addition to 'engineered to order' lines, Rademaker now increasingly focuses on 'configured to order' production lines, offering affordable standard solutions to most applications. With the flexible, reliable and robust Rademaker Industrial Bread Line, you are assured of the highest uptime, a long lifetime, and minimal spare parts consumption. Fast maintenance, cleaning and changeovers ensure efficient production. This, together with the excellent dough handling characteristics, results in a proven decreased cost of ownership. 🏠

**rademaker.com**



## “ THE NEW PERCEPTION OF BREAD, IN THE NAME OF TRADITION ”

Return to the roots and self-care are the trends of the year, boosted by events associated with the pandemic. Bread slots perfectly into this scenario since it represents the quintessential comfort food, with a connotation that is extremely traditional.



by Elisa Crotti

One thing the pandemic has certainly generated is the total disintegration of our convictions, accompanied by a desire to return to the “good old times”, to a world that is perfectly – or at least illusorily - under control. It goes without saying that the food industry, bread-making especially, has rapidly responded to this need. A need that was so urgent that its primary ingredient, yeast, suddenly disappeared from supermarket shelves. What is the current situation, now that more than two years have lapsed since our attack of empty shelf panic? How have consumer tastes evolved? Not surprisingly, bread continues to be an on-trend food topic, with its agreeable connotations of comfort food in our desire to return to the roots. However, certain aspects have changed. The passion for home-made bread has waned and consumers now want their bread to be fresh, crisp, and above all flavour-packed.

From a very recent survey by Taste Tomorrow, the most important ecosystem for understanding consumer tastes and preferences in the bread, pastry and chocolate industries, it emerges that 23% of global consumers continue to buy quality bread while a mere 12% intend to decrease the amounts consumed and opt for less expensive products. This fact is particularly interesting if we consider that the reduction in food expenditure







has a greater impact on other similar products, such as cakes and pastries, for which 29% of the sample intend to reduce their expenditure, and chocolate-based products, which reveals an equally significant 24%. As a further confirmation, about half (48%) of the consumers interviewed by Taste Tomorrow in April 2022 declared that they do not choose the cheapest bread and will continue to buy products they trust. This fact is even more eloquent in the light of the great concern expressed by the entire industry, and by consumers first and foremost, for the cost-of-living crisis and high fuel costs.

### **The cost-of-living crisis**

One of the main challenges facing the bread industry in 2022 is the cost and availability of certain ingredients, particularly sunflower oil and grain. Discussion is under way in various sectors on rising prices and to what extent this affects various areas of activity. Not only: the consumer sentiment index is also aligned with this scenario, rising food prices being one of the main concerns. This has led to considerable changes in purchasing habits which, unexpectedly, have only had a minor impact on the bread industry. The latter, on the other hand, has been badly affected by price increases, partly due to the war, which has influenced pricing dynamics because of logistic costs and the increased price of wheat and maize owing to various concurrent causes on an international level – only 6% of soft wheat

(less in the case of durum wheat) is supplied by the area involved in the war. Some data emerging from the latest sentiment analysis promoted by Confcommercio Milano and the Bread Producers Association (with data processed by the Studies and Analyses Department of Confcommercio Milano) show that almost all (96%) operators highlight the increase in costs associated with rising fuel and raw materials costs: 39% have registered a cost increase ranging between 5 and 20%, 32% between 20% and 50%, while one company out of ten declares they have registered a rise in costs of over 70%.

Going back to the topic of market trends, the same survey also reveals an increase in the consumption of pizza and focaccia in the last two years for 45% of operators. The average pro capita consumption of bread remains stable at 80 grams a day, while the consumption of breakfast products has risen (+32%).

### **What do consumers look for?**

Assuming that consumers of bakery products, and of bread in particular, have not substantially changed their purchasing patterns, some aspects stand out as essentials for the near future. Ancient grains, bread and other baked products, coffee and all those foods people turn to when the going is tough will be the protagonists of the future gastronomic scene, in a context in which a return to fundamental values and traditional products reflects a need for security and stability. The constant monitoring of the behaviour patterns, attitudes and choices of local and global consumers provides us with precious and detailed information, from which certain trends have emerged.

The first concerns confidence and craftsmanship, with an ever-growing preference, also on social media, for traditional products. The aforementioned Taste Tomorrow research confirms that consumers expect flavour and comfort from such products, because they celebrate traditional and genuine recipes. While 60% of consumers seek new experiences from bakery products, 67% prefer familiar, traditional aspects, but with an extra something. Substantially, innovation is welcome when based on the strong roots of tradition (in Italy, 87% of consumers appreciate traditional flavours and 69% would like to taste something familiar when they try new types of food).

If, on one hand, consumers require freshness, appreciate craft products and continue to seek comfort in traditional and genuine recipes, on the other hand there is a marked tendency for bakers to diversify their offering with pizza, focaccia, bread substitutes and quality cakes and pastries: so baker's shops have become places

of consumption, gathering and conviviality. More and more often, consumers elevate the purchase of a simple product or service to the level of an authentic experience with the capacity to trigger emotions. Also, in the case of bread, a new concept is gaining ground, that of associating bread with design. We refer to the so-called designer bakeries, which create venues that please both the palate and the eye. As a consequence of the 'return to the roots' trend, yeast now occupies a privileged position between innovation and artisanal tradition, resulting in a demand for bread produced with mother dough that is second only to plain bread in terms of sales. The awareness of mother dough has grown considerably in recent years and is expected to increase further in 2023. Traditional brands are including it in their products and consumers seek mother dough options also in croissants, brioches, muffins, panettone and other products. The main driver of this trend would seem to be the flavour conferred by this ingredient.

Freshness is another key factor: consumers expect fresh bread supplies every day, and this trend for fresh on demand also affects frozen products for preparing at home, such as croissant, pizza and focaccia. By entrusting most of the preparatory phase to large-scale producers or artisanal bakers, and by taking control of the cooking process, consumers can enjoy maximum freshness whenever they feel the need. Finally, consumers are increasingly attentive to dietary choices and the way they want their bread is no longer a mere que-

stion of taste and aroma: other factors come into play, such as sustainability and food safety.

### The new bakers

In the past, the Italian words "fornaio" and "panettiere" stood for two different jobs. The fornaio tended to the fire and looked after the oven, while the "panettiere" or baker was responsible for making the bread, from the choice of flour to cutting the dough into different sizes and shapes. Nowadays, the two terms are used as synonyms, and the baker is the professional figure who tends to the entire production process of quality baked products, starting from the raw materials. This is a highly specialized job that combines a traditional craft with the use of new production and baking technologies. Bakers need to have an in-depth knowledge of their market, they must be skilled in communicating the uniqueness of their products, as well as understanding and satisfying the needs of a clientele that is increasingly variegated and attentive to health-related topics and quality ingredients.

Their evolution follows that of consumer patterns and embraces the use of social media, the Internet, food delivery services and anti-waste apps. This evolution responds to a market that tends towards an increasingly mindful consumption, with a rise in the use of non-refined flours and mother dough, to enable fresh bread and other baked products to maintain their primary role in satisfying consumer needs.







# PERFECT MIX: planetary mixer with electronic variator

**P**ERFECT Mix is the name of these planetary mixers with exceptionally innovative features. A greater range of speeds distinguishes them from the other machines on the market and gives the possibility of increasing the number of workable products, greatly increasing the capacity to give volume to emulsified products and to be able to mix even the thickest doughs at very low speeds.

The operator himself can assign to the preset speeds from the factory, the number of revolutions of the tool that most prefer thanks to a touch screen panel installed on the machine.

Other important new features include: contact diagnostics, the setting of the wished language and the ability to program and memorize 5 recipes with multiple mixing steps.


Great innovation of the PERFECT Mix

line is the innovative system of pouring the ingredients through a hole in the center of the planetarium.

This patented innovation allows an excellent distribution of the ingredients during the mixing phase. The power of the motors coupled with coaxial gearboxes gives the machine the possibility of working even in the most critical situations, however always respecting the use tables limits indicated in the manuals. Under the plastic protection in PETG, easily removable for a more accurate cleaning, there is a led light that guarantees excellent visibility of the product during its mixing.

Many parts, usually treated with chemical food or painted nickel, have been replaced with AISI 304 stainless steel ones, for greater guarantees of hygiene and durability. Particular attention was paid to to remove as many as possible screws and protrusions from the structure, creating an ergonomic and highly cleanable equipment.

The PERFECT Mix range consists of 2 models (40 and 60lt) with manual bowl lifting and three models (40-60 and 80lt) with motorized bowl lifting and lowering of the bowl and total disengagement of the tool for an easier removal from the machine.

In addition to standard equipment such as bowl, blade, whisk and a spiral, the machines can be equipped with a large number of accessories such as scrapers, special whisks, bowl trolleys, reduction kits for tank and tools and bowl lifters of different heights. 

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**SIGMA**  
Bakery Pastry Pizza equipment



# ITECA®, Special Fully Automatic Technological Bakery Plants



**ITECA®**  
Automatic Lines

**I**TECA® S.p.A is an Italian manufacturer, leader in the production of fully automatic bakery plants for over 30 years.

ITECA has chosen to invest in research, human resources and field-work expertise. These choices provided us with constant growth at both technical and manufacturing levels, and today Iteca markets, designs and assembles the most advanced plants for bakery products, tailored-made, based on specific demands of each client, both in Italy and abroad.

ITECA know-how allows to offer to its customers big and fully automatic systems from silos to the packed finished product, also through the collaboration with different partners of specific experience.

The entire process is based upon customer requirements, in order to grant maximal results in terms of product quality and return on investment.

ITECA® reached, for some products, a production capacity never reached by any other manufacturer and the high performances of the plants have been always recognized by all customers.

This is possible thanks to continuous training of engineering and technical staff, allowing ITECA® to be one of the leaders in cutting-edge turnkey plants for large productions for many products, such as:

BREAD such as baguettes, loaves, ciabatta and coarse bread (2,000-8,000 Kg / h)

LOAF BREAD from laminated sheet, on a single chain (1.000-2.000 Kg / h)

BREAD DERIVATIVES such as taralli, sticks, stretched, rolled and pressed breadsticks, thins (250-4.000 Kg / h)

SODA AND CREAM CRACKER (1.000-5.000 Kg / h)

PIZZA fresh and frozen pizza, American pizza, gluten free pizza, calzone, panpizza, focaccia and... the real Neapolitan pizza! From ball or from lamination system. And also, Arabic bread and tortilla (500-16.000 pcs / h)

Classic, wholemeal, cereal and light RUSKS (1.000-2.500 Kg / h)

CROISSANT, mini-croissant, saccottini, strudel and leavened products with puff pastry with the possibility of choosing the degree of puffing of the product, weight, size, type of filling and two-color (23,000-100,000 pcs / h)

INDUSTRIAL PASTRY: scones, cookies brownies, muffins, plumcakes, sponge cakes (100-2,000 Kg / h)

BISCUITS laminated, rotary, extruded, wire cut and cast (3.000-5.000 Kg / h)

ITALIAN TYPICAL PASTRY PRODUCTS: pandoro, panettone, colomba cakes (1.000-8.000 pcs / h).





The R&D department is also developing new projects and innovative recipes based on the evolution of market demands worldwide.

**COMPONENTS OF ITECA® LINES**

ITECA® lines are complete and fully equipped with the best components such as industrial ovens, proofing chambers, air-conditioned chambers, conveyors, depanners, picking systems, special applications such as boilers or steam pasteuriser, scoring machines, vacuum tunnels for cooling of traditional Italian desserts, automatic oilers, flouring dusters and seeds/grain dispensers.

**ITECA® INDUSTRIAL LINES ARE TAILORED TO THE NEEDS OF EACH CUSTOMER AND CAN REALIZE A LARGE VARIETY OF PRODUCTS.**

**OBJECTIVE: HYGIENE AND SANITATION DURING ALL PRODUCTION PHASES**



ITECA® pays close attention to the cleanability and sanitation of its equipment and all lines are built with a view to maintain high standards in terms of hygiene and cleanliness.

Where possible, the different components are easily removable and disassembled. Specific procedures are provided to customers to facilitate all operations.

**ENVIRONMENT AND SUSTENIBILITY**

ITECA team is constantly engaged in designing tailor-made solutions with a view to sustainability by cutting CO<sub>2</sub> and harmful substances emissions. This results also in lower energy consumption and in sensitive minimization of operation costs. 🏠

**ITECA looks forward to welcoming you in the West Halls at stand n. 2476 in LAS VEGAS CONVENTION CENTER**

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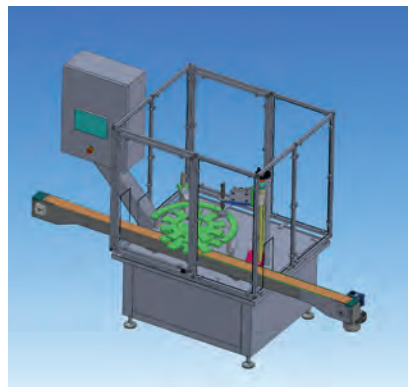
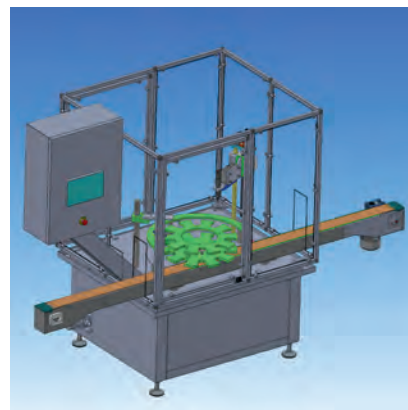
# PMR is celebrating its first 50 years designing innovative machines, in Industry 4.0 logic

**W**e are a company with a great experience in the manufacturing of **labelling, filling, and capping machines**. PMR since 1971 is providing aimed solutions for a wide range of productive sectors, answering the most different technical needs with the innovation capacity and continuous research of advanced solutions that are typical of the **Made in Italy** philosophy.

Among the most performing solutions is the **Roller Capping Unit**, a 6000 pcs/h that is adaptable to different cap types, brushless motors actuated,

equipped with a digital control panel with remote assistance and an external systems interface suitable for **Industry 4.0 Logic**. With the target of a smart manufacturing process, for this project PMR has dedicated a great attention on the HMI (Human-Machine Interface), designing and improving a new "ad-hoc" easy and fast software for the operation of format change, that perfectly integrates in your management company systems.

The new **Monoblock PMR MFC 22**, a filling machine for liquid/dense products and capping with twistoff caps. The volumetric rotative dispenser



**PMR MFC 2022**





**PMR ROLLER CAPPING UNIT**



is made of a rotative pump in Inox AISI 316 and a drip-catching nozzle with a two-way pilot valve, dose synchronized. The capping system has a pneumatic motorized closing head, with adjustable torque value. The system has also a caps dispenser with unloading rail adjustable for different formats, and a caps presence control device. The unloading rail is totally independent from the system and can be easily adapted to any customer requests, in compliance with the different products and boxes, speed max to 1800 pcs/hr.

PMR, in recent years, has also renewed and improved the historic labelling lines:

the **M3010 FR** able to apply two pre-printed labels, the **M3005 T** able to apply labels on round products, the **Robottino** to print on flat carton boxes and similar, the heads **CLASSIC NEW 3** and the **PRINT & APPLY LM**, and all the semi-automatic packaging machines.

A survey conducted together by the italian newspapers **lSole24** and **Statista** revealed **PMR as one of the 200 companies leaders in Export 2022**. This important result has been achieved thanks to the particular attention in following customers during all the production process, up to the final installation that is realized both in Italy (directly by PMR) and abroad (thanks to our partners). Today PMR is a modern company that quickly adapted itself to the Market, investing everyday on the research and innovation process of the high-performance materials and applicative softwares, now essential parts in the Industry 4.0. 🏭

[www.pmr.it](http://www.pmr.it)



FILLING • CAPPING • LABELLING



**M3005 S FOR LABEL APPLICATION ON SALAMI**



**M3010 T FOR WRAPAROUND LABEL APPLICATION**



**M3010 FB FOR FRONT/ BACK LABELS APPLICATION**





## INDUSTRY 4.0 *ready!*

### We take care of your products

For over 50 years we have been manufacturing filling, capping and labelling machines.

With us you have **an high-quality machine**. We are a team of experts who follows and develops the best solution for your products.

**You have a custom solution:** we design and build according to your specific needs, our machines are modular and can be inserted into existing lines.

With us **you have a secure result**. We perform several preliminary verification steps; we test and inspect our systems with your product and in your presence.

**Make a safe investment.** Our systems are guaranteed for 24 months and our technicians are always available for consultation.



**PMR MFC 22**  
Filling & Capping Monoblock  
for food products.  
**> EASY TO USE**  
**> EXCELLENT QUALITY / PRICE RATIO**



**FILLING · CAPPING · LABELLING**



# ALBRIGI: ingenuity, style and technology at the service of the food industry



**A**lbrigi Technologie can define itself as a world leader in the production of stainless-steel systems for food, wine, chemical, pharmaceutical, cosmetic, bio-nano technologies and oil industry.

For many years Albrigi Technologie has been studying, researching and experimenting new solutions with the main aim of realizing complete turnkey systems with liquid transfer and processing tech-

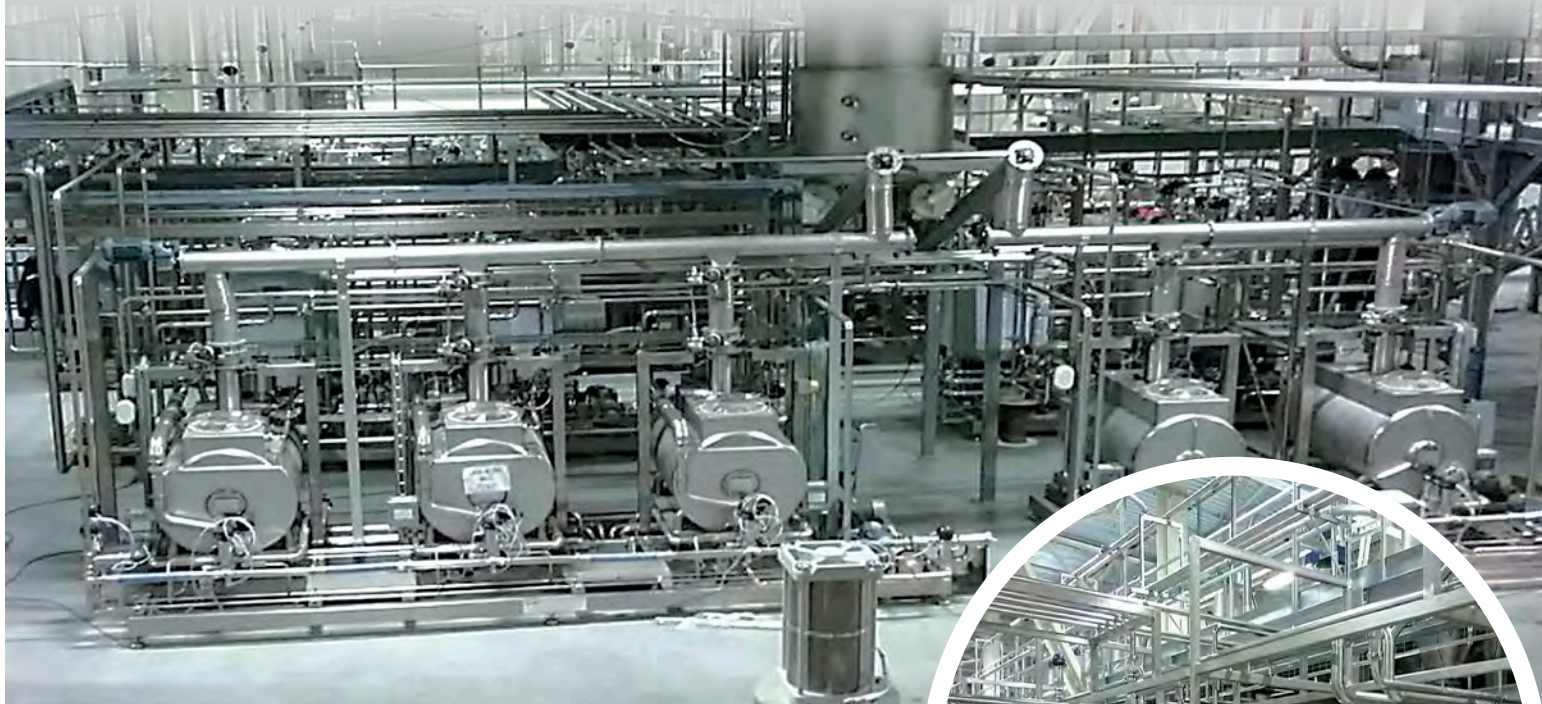
nologies. Albrigi Technologie produces tanks, reactors, ripeners and mixers with the highest quality, in order to offer to customers services and technologies aimed at money saving, reducing costs, times and pollution, limiting or totally eliminating mistakes and contaminations. All these advantages permit to increase production and help customers to obtain a prestigious and high-quality product.

Following the evolution of the market and production needs, Albrigi creates both external and internal systems for the storage, mixing and processing of food liquids in compliance with the safety regulations, according to the HACCP, FDA, PED, ATEX, ANTI-SEISMIC regulations which are fundamental rules that dictate the basic requirements of Albrigi Technologie plants, tanks, reactors, ripeners and mixers.



# WHERE THERE'S ALBRIGI TECNOLOGIE, THERE'S A GREAT SYSTEM

MADE IN ITALY



MASTER  
PLANTS



CHEMICAL  
PLANTS



OENOLOGICAL  
PLANTS



FOOD  
PLANTS



ALBRIGI



We device design and construct stainless steel equipment:

- for high production levels, including round-the-clock
- respect for the raw material and the finished product
- instruction and training of the client's personnel
- with continuous automatic control of the product quality
- no manual labour
- no processing waste
- no product pollution
- recovery and saving of energy
- maintenance reduced to a minimum
- environmentally friendly
- loan facilities

## Industries



ALBRIGI SRL

via Tessare 6/a - 37023 Grezzana (VR) - Italy

tel. 045 907411 - fax. 045 907427

info@albrigi.it - [www.albrigi.it](http://www.albrigi.it)

**ALBRIGI**  
TECNOLOGIE SU MISURA



*Storing, mixing, weighing, measuring, dosing, transferring, heating, cooling and processing liquids with special vacuum or pressure processes is our specialty.*



All systems are complete with pumps, pipes, weight and level sensors, liter counters, manual and pneumatic valves, with inert gas – nitrogen - CO<sub>2</sub> – argon saturation, high performance electrical panels.

These last are monitored by P.C. and PLC for the management of transfer processes, that operate both in manual and in automatic mode, equipped with

customized programs with algorithms, which reduce labour up to 70%.

Albrigi Tecnologie is specialized in the study and application of programmable manual and fixed automatic washing systems, managed by PLC, with customizable software and process self-

checking systems up to complete sanitization and sterilization in every internal or external point, always respecting environment by reducing pollution, washing times, energy use and purification costs up to 80%. 🏠

**[www.albrigi.com](http://www.albrigi.com)**







CANTINA  
**SANTADI**

SULCIS - SARDINIA - ITALY  
Via G. Tachis, 14 - 09010 SANTADI  
Visit [www.cantinadisantadi.it](http://www.cantinadisantadi.it)



# CANTINA SANTADI: History, Territory, Culture, Taste and Traditions of our rural reality

**C**antina di Santadi is located in the Basso-Sulcis-Iglesiente, the south-western area of Sardinia; as the crow flies, it is only a few kilometers away from the wonderful beaches and white dunes of Porto Pino. Born in 1960, after overcoming the difficulties of the first years, with the arrival of a new management team, animated by the determination that generates enthusiasm and passion, the company adopts new strategies that give it a new look, with more coherent directives for the producing members. The goal is ambitious, to focus on bottled wine "typical red wines in particular" to give visibility and identity to the main cultivar of the territory: Carignano, without however neglecting the traditional white grapes of Sardinia, such as Vermentino, Nuragus, and Nasco. From an enological point of view, the winery is definitely looking up, by asking for the advice of the internationally renowned enologist Giacomo Tachis, whose arrival gives a turning point to Cantina di Santadi. From the grapes of the vineyards planted with sapling (vigna latina) are obtained wines based on Carignano, with an exuberant extractive content, a noble tannic framework, and a perfect balance between organic acid component, alcohol content, and polyphenolic value.

The careful use of French oak barrique harmoniously contributes to favor the evolution cycle of these exciting wines for aging such as Terre Brune, Rocca Rubia, Noras, and Araja. The range of red wines is completed with Grotta Rossa and Antigua, with the rose wine Tre Torri, the sparkling wine Metodo Classico

Solais and the refined white wines Villa di Chiesa, Cala Silente, Pedraia, and Villa Solais as well as the dessert wines Latinia and Festa Noria. The assiduous and constant dedication of our producers together with the innovative spirit and the respect of the territorial tradition, aim at hon-

oring the winery and preserving a real heritage of history, culture, style, and taste, which are the real essence of our farming reality. 🏰

**[www.cantinadisantadi.it](http://www.cantinadisantadi.it)**

**IG: #cantinadisantadi**

**FB: @cantinadisantadi**









# Equipment and lines for the integrated processing of FRUIT and VEGETABLES

**N**avatta, 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 depalletizers, 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 Etore, in 2012, specialized in special

batch plants for ketchup, sauces and jams.

*Complete Fruit and Vegetable receiving washing juice extraction group*



*Single head aseptic filler Webzero for web small bags 3-5-10-20 liters - automatic loading system - no operator needed. Semiautomatic filling of 220 bags in drum. Patented System.*



## 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,



*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 GROUP**  
Food Processing S.r.l.

*Under Vacuum Cutter with the function of crushing/mixing/cooking of products, combining them with vacuum and thermal processes. Ideal for high viscosity formulated products like jams, salted and sweet creams, sauces, jellies, yogurts.*

Bag-in-Drum 220 liters, Bin-in-Box / IBCs 1.000 – 1.500 liters;

- Piston Fillers
- "all-in-one" pasteurizer / cooler spirals
- 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

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. 🏠

[www.navattagroup.com](http://www.navattagroup.com)



**FOOD**  
processing

# Among our company's top products are Automatic and manual peelings

**A**mong the **most innovative companies** in the field of **construction and marketing of machines for fruit processing**, PND srl is continuing to follow its path of growth and specialisation, further consolidating its **leadership in international markets, providing the ideal solution** to its customers who are engaged in processing fruit by

**anticipating and supporting market trend, continuously designing and constructing new machinery.**

The company's success has not distracted PND from its own objectives: to design machines capable of efficiently fulfilling the required task and **continually improving processes.**

PND is proud of its **strong identity**. This philosophy allows the company to only focus on the singular task of designing machines that will complement our customers goals. **By focusing on the customer, we avoid the pitfalls of frenetic diversification.** The only recognition to which PND aspires is the satisfaction of its **customers,**







who **choose PND machines based on** the substance of the proposed solutions.

By selecting PND as a business partner, the customer chooses a made-to-measure technology. PND's ability to renovate its image and the new communication strategy **make it** among the most modern companies in the sector.

The **experience** that we have gained in the last **22 years of activity** has allowed PND to make **continuous innovation on ma-**

**chinery design and creating an** extensive catalogue of machinery. This includes advanced solutions for the processing of **pears, apples, kiwis, oranges, grapefruits, lemons, pineapples, lemons, mangoes, strawberries and peaches, with all possible variations** in order to meet the needs of companies processing fresh products in Fruit-Fresh-Cut, the **canning industry** (fruit in syrup), and **dried and frozen** sectors.

Among our company's top products are **Automatic and manual**

**peeling, coring and cutting machines** as well as treatment and prewash tanks for many varieties of fruits.

In the **United States, the Fresh Cut sector** is a fast growing and important sector of the food industry. But in other countries like Turkey, the main operations are focused on dehydrated or dried products. This trend is also proving a **great success in Europe** where **dried fruit** is racking up triple-digit figures in the percentage growth of **dried fruit snacks**.

The food industry has always had a **need for innovation, with different** requirements and uniqueness depending on the different target markets. By choosing one of the **18 semi-automatic, manual or automatic machines** manufactured by PND, customers are choosing a standard machine that can be tailored to your needs. All of PND's machines are designed to **facilitate inspection, maintenance and cleaning tasks**, and possible **replacement** of damaged items, thanks to the **easy access** to the corresponding parts.

Those wishing to learn more about the wide range of solutions offered by PND srl can visit the website. Visitors can also see our full calendar of **international trade events**. 🏛️

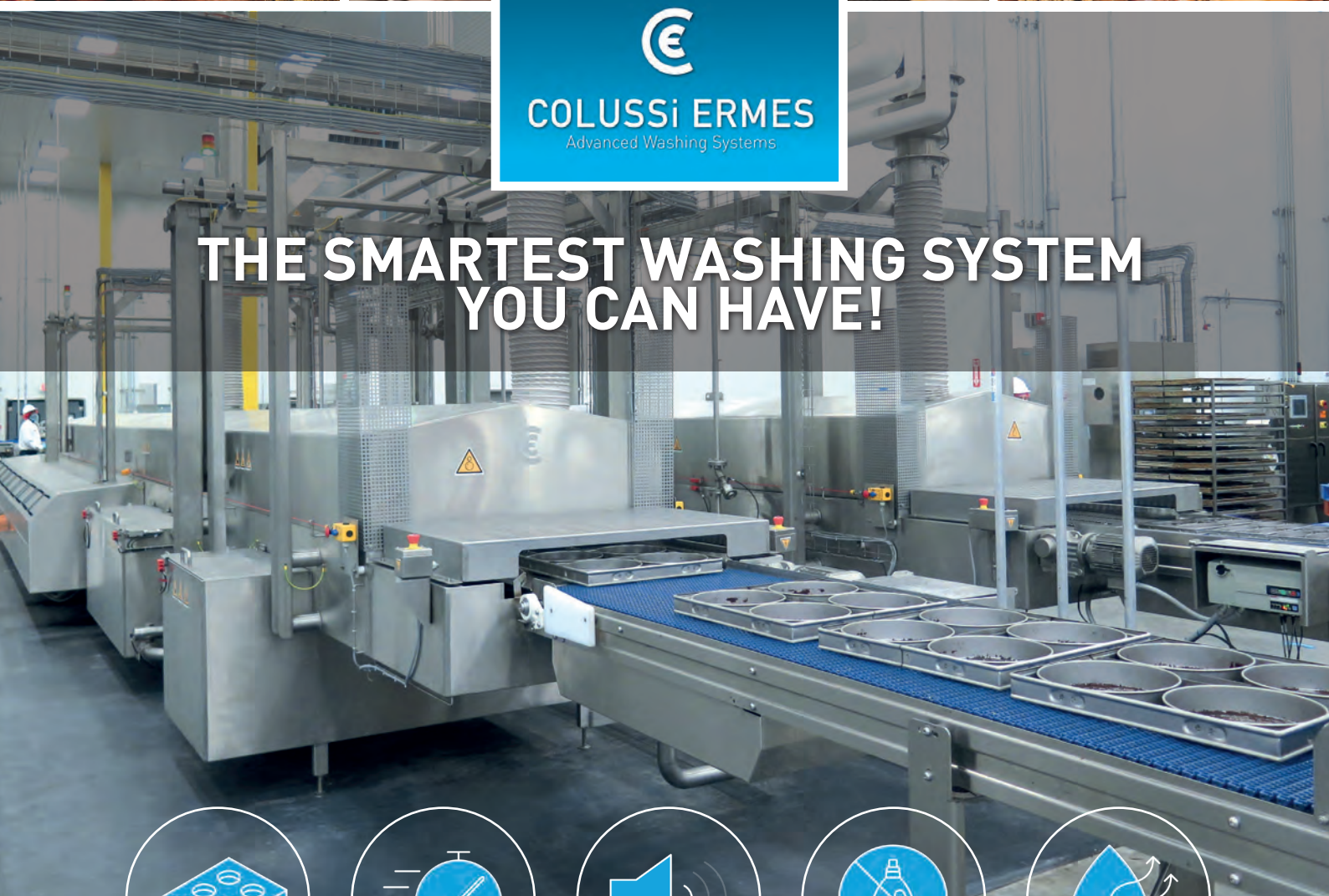
[www.pndsrl.it](http://www.pndsrl.it)







# THE SMARTEST WASHING SYSTEM YOU CAN HAVE!



**BOTTOM  
DOWN**



**HIGH  
SPEED**



**LOW NOISE  
LEVEL**



**NO  
DETERGENT**



**DRYING  
INCLUDED**

COLUSSI ERMES is a worldwide leader in the design and manufacture of tailor made washing systems in various food sectors, such as the bakery, confectionery, chocolate, meat and dairy, and also in logistics, pharmaceutical, hospital and automotive Industry. Colussi Ermes will propose the best solutions for manual and inline pan washers with variable capacities up to over 30 items/minute, bottom down loading and introduction height up to 4". These pan washing systems ensure maximum hygiene, eliminating any bacteria, even the most aggressive, protecting consumers according to the new strict standards.



[www.colussiaws.com](http://www.colussiaws.com)



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# COLUSSI ERMES: leader in the production of industrial washing systems, has been acquired by Middleby

**O**n July 28th, 2022 Middleby Corporation announces the acquisition of Colussi Ermes, global leader in the production of automated washing solutions for the foodservice industry. The company, which realized over 6.000 machines worldwide and an annual turnover of about 50 million Euros, thanks to its continuous research and consolidated know-how over the years, has become specialized not only in the bakery, confectionery, meat, dairy, fruit & vegetables, poultry and fishery sectors but also in more complex fields such as the pharmaceutical, hospital and logistics sectors. "Colussi Ermes is a highly respected, global leader directly addressing

food safety and sanitation, a top priority across the entire food processing industry," said Tim FitzGerald, Middleby CEO. "Colussi has the broadest offerings of automated washing solutions, covering a wide array of applications. Their washing solutions are in demand due to technology that reduces labor needs, decreases water and energy usage, minimizes chemical use and operates in a small footprint."

"The transaction makes me proud as it represents the acknowledgment of the value of the company by a leading international group, created over more than 50 years thanks to the work of all the people who are a fundamental part of Colussi Ermes," said Giovanni Battista Colussi, Chairman of the Company.

"The Colussi family wants to offer Colussi Ermes the best prospects within





the most qualified international industrial group, in order to accelerate its development with broader and more ambitious objectives.

My sons and I will continue to be actively involved, with Andrea and Chiara in a first line position as CEO and co-CEO of Colussi Ermes, guaranteeing continuity and full commitment for a successful path of growth. Middleby has recognized the value of the company, its people and the skills available in the local community and is willing to invest in them”.

A modern and dynamic brand, showing an exceptional capability of addressing a constantly changing market. Values such as innovation and organization to guarantee competitiveness, flexibility and quality for absolute environmental protection. Colussi Ermes has always been a synonym of excellence – excellence in industrial washing.

Today, Colussi Ermes is a company which exports all over the world,



extensively in many countries. Tomorrow, thanks to the acquisition by Middleby, Colussi will widely cover all the market wherever product washing and sanitizing is required.

### **Automatic centrifugal machine to wash trays and equipment placed on racks**

The rack washing systems have been carefully engineered to wash racks carrying different kinds of equipment.

By means of specific frames or special trolleys, it is possible to wash pans, crates, pallets, bins, meat-trucks, containers or isotainers fully respecting the highest washing and sanitizing hygiene standards.

The washing capacity is very flexible: from a minimum of 20 to a maximum of 120 racks/hour.

### **Industrial mixing bowl washers**

The industrial mixing bowl washing systems are equipped with fully automated advanced technology and ensure impeccable washing and drying results. Thanks to special monitoring, connected to HACCP systems (Hazard Analysis and Critical Control Points) they guarantee impeccable results in terms of hygiene. Washing capacity up to 20 industrial mixing bowls/hour.

### **Spin Drying Systems**

Thanks to the continuous evolution that has taken place over the last 15 years, Colussi Ermes has become the absolute leader in spin-drying systems especially with the development of the first. 🏠

[www.colussiermes.com](http://www.colussiermes.com)

# DIZIINOXA: production lines, equipment and tanks for industry

**D**IZIINOXA Srl established more than 30 years ago is today an excellence in the engineering, manufacturing and installation worldwide of high technological plant for the Food & Beverage industry:

- **Complete processing rooms in stainless steel, for the storage, blending, and transferring under aseptic conditions for the fruit juice processing.** Aseptic conditions with steam (SIP) or chemical (CIP) method, tank capacity from 5m<sup>3</sup> to 5.000 m<sup>3</sup>.
- **Syrup rooms.** Fully automated electronic control of the receipt, ingredients intake, blending, transferring and bottling. Complete traceability of ingredients, processing and final products.
- **Atmospheric stainless steel storage tanks, with jacket and insulation, mixers and the complete accessories.** Storage, cooling, blending, and preparation to the final transfer. Features on request: double jacket, internal cooling plates, full or partial thermal insulation, classic mixers with mechanical seals or magnetic transmission mixers.
- **CIP (cleaning-in-place) mobile unit.** Automated, semi-automated, mobile (on chariot) or fixed (on skid). Electronic control and full traceability of the cleaning process and, if requested, of the subsequent sterilization or nitrogen blanketing. The mobile unit if fully automated, the operator is required only for the hose connection.
- **SIP (sterilization-in-place) mobile unit.** Fully automated SIP process with continuous steam and subsequent nitrogen blanketing (up to











tank cap. 1.500m<sup>3</sup>. Equipped with: anti-implosion safety feature and cycle log book.

- **Degasifier, heat exchanger for heating or cooling.** Shell and tube, tube-in-tube or simple tube.

**DIZIOINOXA**, strong of its 50 years of manufacturing experience,

has gained a prestigious place as preferred partner of worldwide clients.

Our signature: the total quality management ranging from the design stage to the material selection, till the commission and start-up side by side with our clients.

We are present in Italy and the whole Europe, as well as Israel, Tunisie,

South Africa and the Far East. And today, for the US market we can supply 3-A Sanitary Standards Inc. certified storage tanks.

**DIZIOINOXA** operates in an organized and controlled manner in accordance with the company's certified international standards (ISO 9001, ISO 14001, OHSAS 18001, EN 1090 and EN 3834) and guarantees that all stages of communication with the Customer, from order acceptance to delivery, comply with the procedures of this system. The entire company structure is therefore voted to be the partner of excellence for its customers.

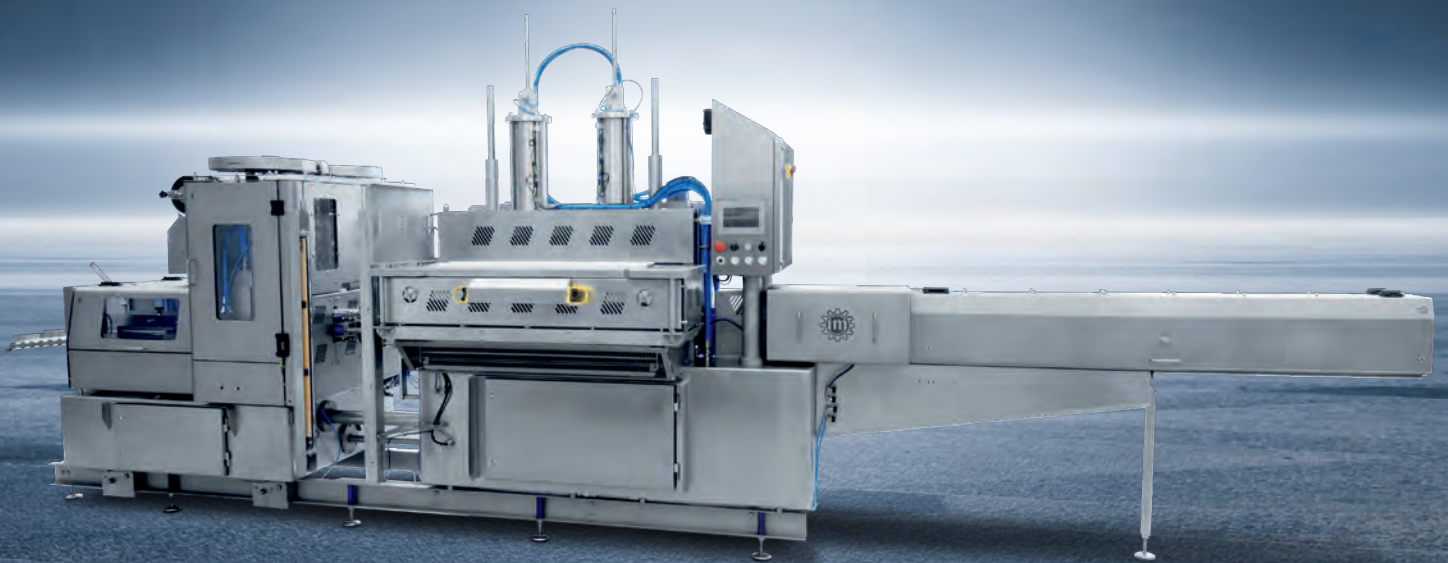
Words from our CEO Renzo Coletti *"the whole company is devoted to deliver value added solutions able to increment the competitiveness of all our clients"*. 🏠

[www.dizioinnox.net](http://www.dizioinnox.net)





# NEW PIC 99 DRW



## NEW STUFFING SYSTEM IN CASING AND NET WITH AUTOMATIC TUBES ROTATION AND PRODUCT PREPARATION SYSTEM

**PIC 99 DRW** (1100 mould) is equipped with a product preparation system conceived to fill casings with meat pieces or injected muscles. It allows the positioning and the assembly of several muscles inside a volume reproducing the forming mould.

The inserted parts' overall weight can be monitored through a weight control system featuring a high-precision loading cells and a display viewer.

This allows to obtain bagged bars of constant length.

**INOX MECCANICA S.R.L.**

web. [inoxmeccanica.it](http://inoxmeccanica.it)

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tel. +390376608282

[@inoxmeccanica](#)

in @ v





# INOX MECCANICA: excellence in technology and technical solutions for food industry

*Research, development, and technology are at the core of our projects, aiming to strengthen and preserve our region's traditions and history!*

Inox Meccanica's dream has become reality thanks to a life dedicated to an ongoing pursuit of simplicity, quality and constructive efficiency. That's a fruitful marriage increasing speed in production processes. Here they are the

driving forces shaping our industrial automation concept. As global market leaders since 1975, we design and manufacture machinery for meat processing and packaging, focusing on sausage products. Thanks to the experience developed over the years,

we jumped into a diametrically and complementary field; we full immersed into the world dedicated to washing and sanitation of all sorts of production tools and containers, finding the sector cleverly cross-cutting.

1968 is the year of our first patent; a



**INOX MECCANICA**  
TECHNOLOGY FOR THE FOOD PROCESSING INDUSTRY



date opening the door to a pride that has persisted for almost fifty years. With the desire to satisfy our customers' most peculiar and diversified requests, we have achieved around 50 commercial partnerships which allow us today to cover almost 60 countries all over the world. We manufacture more than eighty machines for industrial plants each year, entirely handmade in Italy, in a workplace covering more than ten thousand square meters. However, the beating heart of our headquarter consists of our almost 100 employees divided between production, warehouse, technical/electrical department, administration and sales. Staff to whom we provide an on-going training to ensure a highly competent workforce. So far, our meticulousness has assured the attribute "quality" to Inox Meccanica branded products which, together

with a selected dealer network and strategic business partnerships, have ranked the company at the peak of the national and international market. The distinctive quality note associated with the Italianness of our AISI 304 stainless steel products, coupled with our after-sales service, make our global expansion visible, reaching all the way to the Americas and Australia. The sales procedure is inclusive, on request, of tests, if the customer feels the need to put our machines to a trial with specific needs and their own food recipes. Thanks to an exclusive Pilot Plant we can test industrial production, both for the development of new products and for the optimisation of traditional production processes. However, our testing does not just end with the packaging procedure. After that, the food can also be evaluated from a microbiological aspect in

the new laboratory, and from an organoleptic and taste angle in a modern, purpose-equipped tasting room.

In the last few months we have developed several novelties. Beside an advanced and updated top-of-the-range PIC 99 BCE, equipped with an automatic loading belt, an automatic tube changing system, and a 1100 mould, we developed a brand new version of this PIC (called PIC 99 DRW) equipped with a product preparation system conceived to fill casings with meat pieces or injected muscles. In fact, it allows the operator the positioning and the assembly of several muscles inside a volume reproducing the forming mould.

The inserted parts' overall weight can be monitored due to a weight control system featuring a high-precision loading cells and a display viewer.



This allows to obtain bagged bars of constant length.

We can't not dedicate a parenthesis on a productive innovation brought by a freshly patented smoking system. Warm woody notes are imparted directly inside our Tumbler to both cured and cooked products, whose work cycle normally consists of a series of technical operations such as osmotic actions, salt distribution, rest or massage in atmosphere or vacuum, and liquid extraction. To achieve this, our R&D department optimized a process which uses a friction generator, such mechanism can generate smoke at low temperature alternated with vacuum phases. Besides the advantage of the considerable time savings, there is a lower weight loss of the product and a milder taste, whereas in respect of the production cycle there is almost zero risk of fire, saving space and plant energy costs.

Inox Meccanica is not just food processing but washing and sanitation too; therefore, we chose to design the best solutions to sanitize all those tools involved in the production process. Such machines have strong transversal applications, just think of the meat production area, the cheese one, the pet-food one, the pharmaceutical one, and the cosmetic one. Plus, our washing solutions focus on maximising energy and water savings by being environmentally sustainable in terms of the amount of resources used in washing, without compromising on pro- and excellent disinfection. The Washing Machine for buggies is just one of the many examples of the how the company materialised its commitment in researching and developing new technologies for washing and sanitation.

Our team upgraded the previous model of the washing machine for buggies by

equipping the washing cabin with two doors; one is used for container entry via an automated system with forks, while the other is placed at the front from which the container is extracted clean and disinfected, again with the aid of automation. In fact, the washing machine is designed to be housed in a wall separating two different areas of the plant, thus eliminating the risk of cross-contamination and the proliferation of bacteria that would compromise the quality of the products together with the safety of the purchasers.

Don't miss the chance to discover the exhibition of the innovative multiverse made in Inox Meccanica in Frankfurt; an opportunity we personally invite you to and which you cannot miss if you want to stay kept up to date.

**[www.inoxmeccanica.it](http://www.inoxmeccanica.it)**





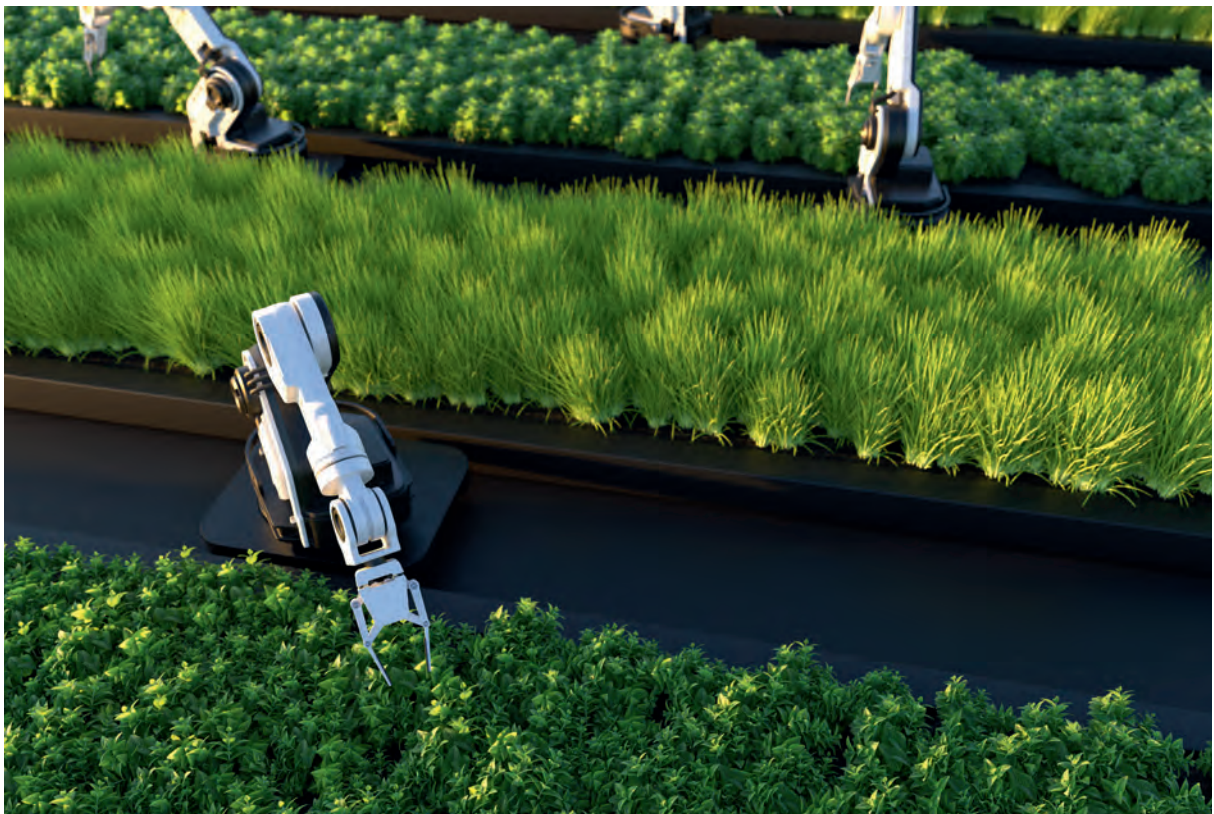
## “TECHNOLOGY AND ROBOTICS FROM PREVENTION TO HARVESTING”

Fruit and vegetable farming looks to the future

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by Elisa Crotti



**T**echnology as an opportunity to look ahead, in a market that witnessed a decline in consumption in 2021 and relies on a supply chain that has still not recovered completely, in which the interests of fresh product exporters and logistics service providers have never been so distant.

In this context, attention to innovation plays a key role in creating new market opportunities, by

optimizing every step in the supply chain: from the land to the table, from production to consumption.

In this perspective with the aim of reconciling innovation with the environmental/economic sustainability of fruit and vegetable production, the spotlight is on certain technologies that could give a new impetus to the sector.

## agricultural machinery today

First and foremost, the use of sensors in agriculture, a practice which has evolved rapidly in recent years: from the use of the first weather stations- essential in the prevention of critical climate issues- , to soil probes, not to mention sensors and biosensors, which are able to directly detect the conditions of a single plant and ensure prompt action in case of need. A series of proposals focused on prevention, also considering the increasingly frequent difficulties associated with climatic conditions.

While it is true that these tools will play an increasingly central role in the near future, especially in view of the possibility to reduce the use of chemical substances in farming, it is equally true that they will require significant investments and an ever increasing awareness on the part of entrepreneurs. In some ways, they will constitute the dividing line between the old and new way of perceiving this business.

While on the subject of technology, it must also be said that the use of drones is increasingly widespread. Their application enhances the sensitivity of monitoring tools from the scale of the plot to that of the single plant, and they even arrive where satellites fail to provide a sufficiently accurate view. Besides, drones can facilitate crop inspection thanks to virtual or augmented reality,

especially in the ambit of phytosanitary defense. This is another way to directly access the needs of the plant (in some cases it is even possible to monitor the condition of the fruit) and make the necessary adjustments and integrations for an optimal harvest.

If we look even further into the future, we can imagine a scenario characterized by the preponderant use of robots. The market is already starting to offer interesting robotic applications for weeding, sowing and tillage. Technology is also pushing, albeit at a prototype level, towards the harvesting of those crops which had so far been excluded from the automation of mechanical processes, thereby opening the world of fresh produce to mechanized harvesting, a prerogative of industrial crops until very recently.

Since the extended use of these technologies will necessarily go hand in hand with the energy issue (how and at what price can we guarantee power supplies to equipment, robots in particular, given the high cost of energy and the rising cost of fuels?), it is necessary to consider possible solutions. A very important one is represented by a growing receptiveness towards the electrification of the agricultural sector, particularly with regard to solar energy. This is an opportunity that needs to be explored by a forward-looking industry.





# Fast Change, DBS and Clean, MINI MOTOR technology bringing innovation to the Food sector

*Three brushless motor lines just perfect for the needs of the Food market*

**M**ini Motor, the Italian company based in the heart of Emilia's motor valley, has been designing and manufacturing electric motors for industry for over 55 years.

Present all over the world with operations in Europe, the USA and the United Arab Emirates and a widespread network of dealers,

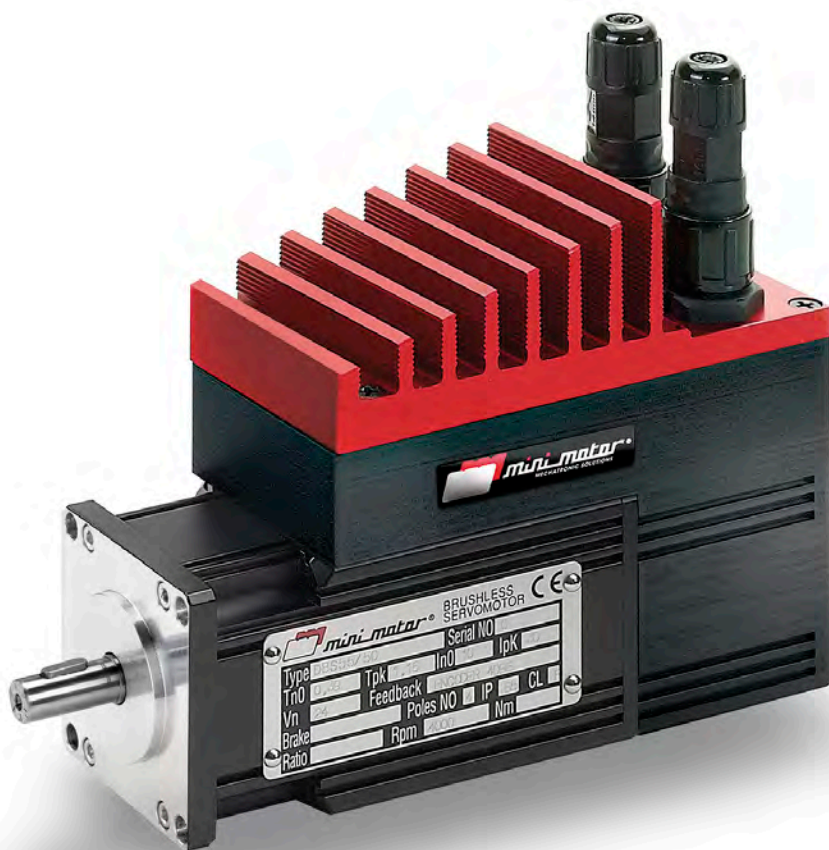
Mini Motor makes innovation and development their source of satisfaction.

**Fast Change is here: Mini Motor creates a brushless line that ensures fast, effective and safe format changeover.**

With the market increasingly moving towards packaging customisation and diversification and thus looking for

a format changeover solution that is both reliable and fast, Mini Motor has listened and tapped into its expertise to come up with a new line of motors.

The Fast Change line stands out for features like compact size, high system compatibility and integration, remote control, and speed. Speed, in particular, is ensured by the greater motor running speed (twice as fast





as our competitors) and the reduced downtime during format changeover, an operation that can be very costly in terms of time and productivity.

The electronics in FC lets you set parameters and run diagnostics remotely, enabling you to control and monitor the running status of the product and thus implement predictive maintenance, which is essential in order to service the machine within a short time frame.

#### DBS Series

Up there with the top products we find the family of DBS brushless gear motors with built-in drive system where all the elements - motor, driver and reduction

gear (where fitted) - are packaged in a single product of indisputable excellence.

The 4096-PPR multi-turn absolute encoder offers maximum freedom in terms of speed and position adjustment, maintaining the distance even when the motor is off. T

he great innovation about DBS is the presence of an accelerometer that is able to detect gear motor vibrations.

The accelerometer plus the other sensors that detect temperature, current and speed are able to identify anomalies within the sensors themselves or from the machine systems connected to

them, implementing real predictive maintenance.

What's more, with DBS several motors can be connected in a cascade system via the main communication protocols: EtherCAT, Ethernet/IP, Powerlink, Modbus, PROFINET I/O and CANOpen. The wireless protocol was recently added to these 6 fieldbuses.

Mini Motor has in fact patented the first all-wireless gear motor in the market powered by an inductive charging battery.

This means no drag chains, which translates into lower machine costs and greater freedom of movement.







thus preventing their contamination and alteration. Thanks to this property, it was chosen as the star material for Mini Motor's Clean brushless motors.

It is the top and unavoidable choice in the food industry because 316L stainless steel is extremely resistant to splashing boiling water (80°C) and high pressure (90 bar) plus very easy to clean.

Featuring a Hygienic Design, the series is ideal for use with the ageing systems used in pork and prosciutto processing plants, and with fish and seafood processing systems. These types of environments typically have high levels of salinity and the resistance of standard 304 stainless steel to corrosion is limited in such applications, whereas the 316L stainless steel chosen by Mini Motor is not affected.

The Emilia-based company does it again, not stopping at meeting what the market needs but tapping into its innovative side to go beyond and create products that deliver real improvements to companies and close the competition gap. 🏛️

**Offering full compliance with the strictest requirements of the industry, Mini Motor stainless steel motors guarantee the highest standards of hygiene,**

**reliability and safety, your must-have allies in food processing and packaging.**

Stainless steel is resistant to corrosion caused by foodstuffs and beverages,

**[www.minimotor.com](http://www.minimotor.com)**



# FARA® functional systems for plant-based nutrition: FARABURGER!

*Based on hydrocolloids (stabilisers and emulsifiers) Faravelli's FARA® functional systems have always guaranteed the best balance between innovation, cost and quality*

**F**ARA® functional systems, from the simplest to the most sophisticated, are tailor-made, following specific customer requests.

The blends include emulsifiers, natural hydrocolloids and functional ingredients that give foods and beverages unique characteristics, for example a well-defined structure, good resistance to thermal stress, improved consistency,

or a characteristic and consistent taste.

The added value is not limited to improving product quality.

Functional Systems, in fact, simplify the phases of research and development, quality control and approval of raw materials, with important economic, practical and operational advantages.

They can be used in the most varied sectors of the food industry.

A rapidly growing trend, **the plant-based diet** favours the consumption of plant-based foods, such as fruit and vegetables, but also nuts, seeds and oils, whole grains, and legumes. In addition, although not biologically classified as plants, mushroom and algae products are also included in the definition.

According to a 2017 Mintel study, which is also collected by the Plant Based Association, taste is the main driver in consumer decision-making, even for plant-based foods. Therefore, it is important to offer products on the market that are not only healthy but also have the organoleptic characteristics that consumers are looking for.

Faravelli has developed a range of functional systems purposely dedicated to the vegan and vegetarian sector, the latest launches being Faramix HH 105 - intended for vegetarian meat alternatives - Faramix FV 104 for bakery products, both savoury and sweet.

## **FARAMIX HH 105 for meat-no-meat burger**

FARAMIX HH105 is a functional system to obtain a "meat-no-meat" product (hamburgers, meatballs, sausages) with visual characteristics and compactness identical to classic ones: meaty, juicy, pleasant to the palate.







Within the plant-based diet, the “meat-no-meat” category is growing just as fast and responds to the new needs and sensitivities of a growing consumer segment.

Plant-based meat is produced directly from plants. Like animal meat, it is composed of proteins, fats, vitamins, minerals and water.

The new generation of plant-based meat looks, cooks, and tastes just like conventional meat.

#### **CHARACTERISTICS OF THE FINAL PRODUCT WITH FARAMIX HH105**

- very juicy despite the absence of fats

- neutral taste (soya is not perceived at all), no flavouring, therefore very adaptable to the taste.
- structure identical to the classic meat burger, without syneresis.
- very versatile, it can be adapted to the most diverse recipe and format requirements, while maintaining its juiciness and fat-free characteristics.

A product so juicy and meaty, people won't believe it's made from plants!

A food that is not only good and high in protein, but also an ally of environmental sustainability.

#### **A certified quality production plant**

First-class expertise in the selection of raw materials available on the market, special attention to food safety issues and a state-of-the-art production plant are the prerequisites to be the reliable partner in the production of powder blends.

Faravelli's production plant is located in Nerviano, near Milan.

It houses a packaging line for customisable solutions and an application laboratory where finished products are tested with methods that closely reflect the final application.

Both the production plant and the Applications Laboratory operate within the Faravelli quality system and are certified according to ISO, IFS, HAC-CP and FDA standards. 🏛️

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THE BEST INGREDIENT

## NIRSO EZIO: since 1969, an Italian excellence

*The Nirso company based in Busto Garolfo (province of Milan) was born in 1969 from an idea of Nirso Ezio.*

Interested in the world of meat grinding, Ezio designs and develops a line of accessories for meat grinders, in particular it specializes in the production of molds and knives that largely satisfy most of the manufacturers of plants for the food industry and producers of cured meats on the market.

Ezio, starting from simple ideas, brings to the market an increasingly innovative and quality product over the years.

In 1991 Ezio left the family business to his son Dario, who has always been very passionate about the world of small mechanical parts, he brings the company into constant professional growth and expansion on the Italian and foreign market

Since 2007, always attentive to market developments, the Nirso company has been buying new numerical control automation systems with software able to control in a precise and detailed way the various processing phases

In 2017, Dario studies and manufactures a patented and certified cutting kit for food use for the production of mortadella, which allows to bring numerous benefits in the grinding phases.

After numerous steps between mechanical tests and paperwork, this patent repays Dario for many difficult moments, when the competition was strong and the market difficult to scratch.

After years of sacrifice and constancy, success has arrived, Nirso products have high quality standards and are among the most







requested in the preparation of foods such as cured meats. Another strong point of the company concerns the sharpening of molds and blades of any shape and size, with a department that presents high quality machinery.

In 2017, Dario added his son Marco to the company staff, representing the third generation, who deals with marketing and communication, supporting his father Dario in the various stages of mechanical processing, to steal all the secrets.

In 2021, thanks to the determination of his son Marco, the company proudly participated in the Meat Tech fair concerning the process and product technologies of the meat industry in Milan from 22 to 26 October, in conjunction with Host and Tutto Food

Humility, simplicity, constancy great human qualities at the helm of the Nirso factory have led it to today's awards.

From attention to detail to logistics, each piece that leaves the company represents the past and the future,

tools of the past and innovation come together obtaining the trust of the largest Italian food companies, all strictly Made in Italy. 🏠

**www.nirsoezio.it**  
**info@nirsoezio.it**



## “EXPENDITURE ON NATIVELY CONNECTED MACHINES AND EQUIPMENT IS UP BY 17%”

Thanks to the incentives,  
exponential growth towards agriculture 4.0



by Elisa Crotti

**A**griculture 4.0 in Italy has grown and continues to grow constantly, despite the Covid-19 crisis and the international geopolitical scenario. According to a survey carried out by the Smart Agrifood Observatory of the School of Management of the Politecnico di Milano and by Rise Laboratory (Research & Innovation for Smart Enterprises) of the University of Brescia, the sales turnover of this market rose sharply from 540 million Euros in the first semester of 2020 to 1.3 billion at

the end of 2020, reaching 1.6 billion in 2021. These remarkable results were presented during the conference titled “Smart agrifood: let’s pick the fruits of digital innovation!”.

There are several technologies on which investments in agriculture 4.0 are primarily focused, first and foremost natively connected agricultural machinery and equipment, which have registered a significant rise in expenditure. According to the Observatory,





this expenditure accounts for 47% of the market and is increasing by + 17%.

The boost is provided by incentives, to the advantage of mechanized equipment and substantial increases in the sale of tractors, for example, followed by monitoring and control systems for after-sale application on agricultural vehicles and equipment. In fact, 2021 represented a year of growth for the registrations of tractors and agricultural vehicles (+ 36% compared to 2020, according to the calculations of FederUnacoma, with a sales turnover for the Italian market of approximately 14 billion euros).

Indeed, with market growth being driven by incentives, especially the subsidies of Rural Development Programs and the Transition Plan 4.0, it is not surprising that three quarters of farms have used at least one Agriculture 4.0 incentive. Of these, 84% argue that incentives have had a decisive impact on investment choices, allowing them to anticipate them (for 44% of companies), to invest in more than one solution (20%) or in a more expensive solution (20 %).

The key to their success was that of linking the tax credit to mechanization and the implementation of innovative solutions. Initially, operators adopted these solutions to obtain the incentives. Subsequently, they realized the benefits of their investment and use rates have increased constantly.

This has extended the area being farmed with Agriculture 4.0 equipment, which reached 6% of the total in 2021, double the previous year.

Also according to the Observatory, in 2021 60% of Italian farmers used at least one Agriculture 4.0 solution, + 4% compared to 2020, and over four out of ten use at least two, in particular management software and monitoring and control systems for machinery. The researchers also report a growing interest in data analysis and decision support systems, confirmed by 26% of farmers who foresee investments in this area of agriculture 4.0 for the near future.

A trend for a new concept of farming, which seems to be unarrestable.



Unsplash



# ALLEGRI, flexible hoses for the food industry

## **P** **HARMALINE N Hose**

W/PHARMALINE N is an unique line of products, PTFE hoses smoothbore inside and convoluted outside, and now included a 316 SS helical reinforcing wire wound into convoluted on the outside to improve strength and flexibility. Covered with a braid AISI 316 SS and a "Platinum-Cured" white silicone rubber cover marked in accordance with EN16643.

The Pharmaline N hose has been designed for to obviate the lack of flexibility and easy of clean internally and externaly of the hose.

## **PHARMALINE X Hose**

W/PHARMALINE X is a very flexible smoothbore inside PTFE hose convoluted outside included a 316 SS helical reinforcing wire with a clear silicone rubber cover "Platinum Cured" marked in accordance with EN16643.

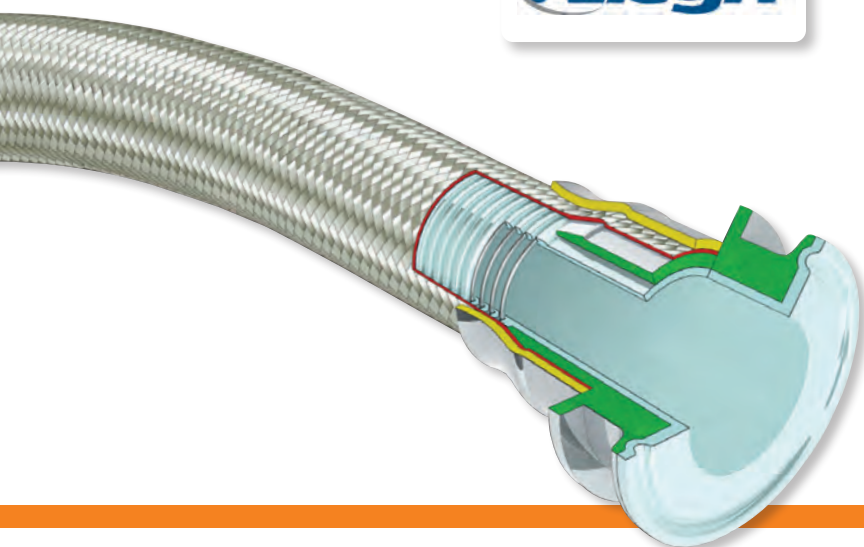
It is designed to replace conventional all-silicone rubber hoses in application where the inner silicone rubber liner may be subject to chemical reaction with fluids passing through, which may either contaminate the fluid, or degrade the rubber liner.

## **APPLICATIONS**

Thanks to its high purity the Pharmaline X is designed for uses not burdensome and high hygiene where the operating pressure is not high; It is particularly suitable in pharmaceutical, biotech, chemical and food due to its high degree of cleaning inside and outside.

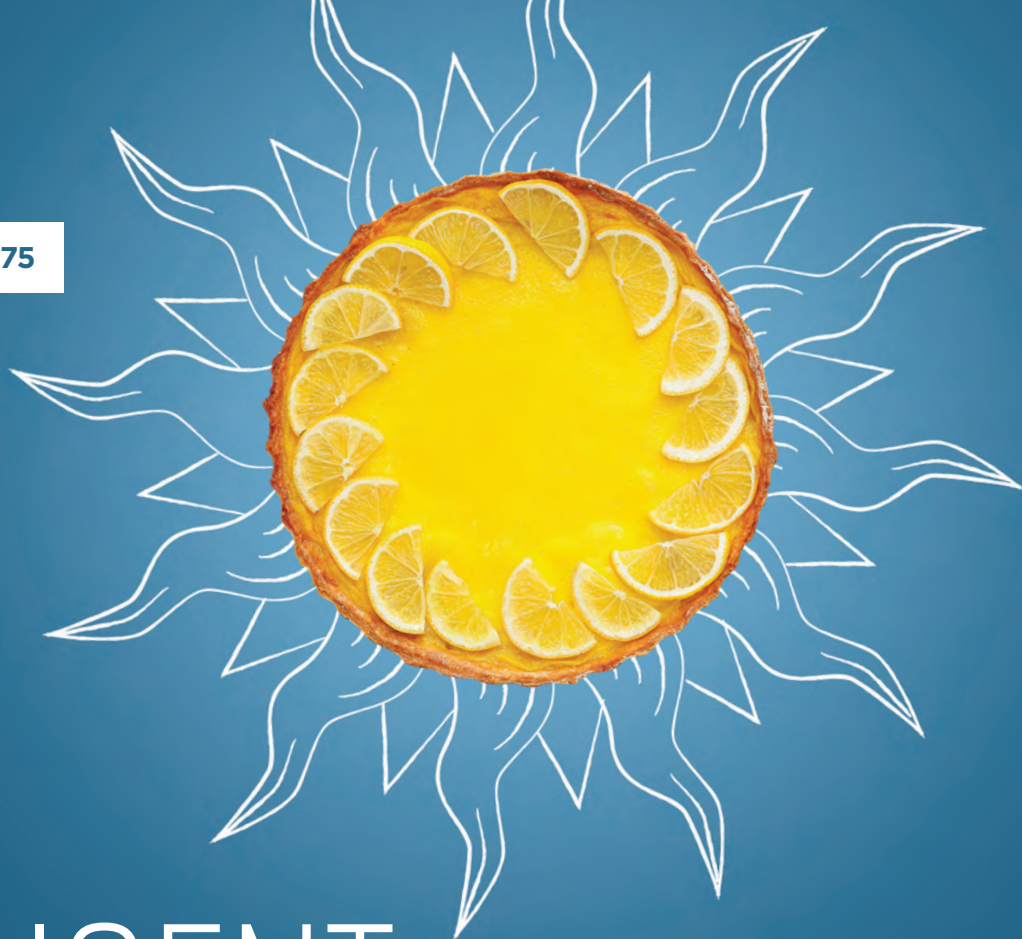
It 'also used in industrial general applications, especially for the passage of hot liquids and gases. 🏭

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**LAS VEGAS CONVENTION CENTER**



# EXHIBITIONS 2022-2023

## PROSWEETS

31/01-02/02/2022   
COLOGNE

Fair for the sweets  
and snacks industry.

## mcTER

24/02/2022 

Exhibition on energy efficiency.

## INTERSICOP

19-22/02/2022 

MADRID

Fair for bakery, pastry, ice cream, coffee.

## SIGEP

12-16/03/2022 

RIMINI

Fair for bakery, pastry, ice cream, coffee.

## BEER&FOOD ATTRACTION

27-30/03/2022 

RIMINI

Fair for beers, drinks, food and trends.

## mcT ALIMENTARE

31/03/2022 

VERONA

Fair on technology for the food&bev industry.

## FRUIT LOGISTICA

05-07/04/2022 

BERLIN

Fair for fruit and vegetables.

## VINITALY

10-13/04/2022 

VERONA

International wine & spirits exhibition.

## ANUGA FOODTEC

26-29/04/2022 

COLOGNE

Fair on food and beverage technology.

## PROWEIN

15-17/05/2022 

DUSSELDORF

International wine & spirits exhibition.

## COSMOPROF

28/04-02/05/2022 

BOLOGNA

Fair for the cosmetic production chain.

## CIBUS

03-06/05/2022 

PARMA

Fair of food product.

## MIDDLE EAST 2022/23

### GULFOOD

13-17/02/2022 

DUBAI

Fair for food and hospitality.

### GASTROPAN

03-05/04/2022 

ARAD

Fair for the bakery  
and confectionery.

### HOSPITALITY QATAR

21-23/06/2022 

DOHA

Fair of Hospitality  
and HORECA.

### DJAZAGRO

30/05-02/06/2022 

ALGERS

Fair for companies  
of the agro-food sector.

### IRAN FOOD BEV TEC

07-10/06/2022 

TEHRAN

Fair for food,  
beverage&packaging  
technology.

### PROPAK ASIA

15-18/06/2022 

BANGKOK

Fair for packaging,  
bakery, pastry.

### ANUTEC

14-16/09/2022 

MUMBAI

Fair for the food&beverage industry.

### PACPROCESS FOOD PEX

23-25/11/2022 

MUMBAI

Fair for product from packaging.

### WOP DUBAI

22-24/11/2022 

DUBAI

Fair for fruits and vegetables.

### PROPAK VIETNAM

09-11/11/2022 

SAIGON

Fair for packaging, bakery, pastry.

### GULFOOD MANUFACTURING

08-10/11/2022 

DUBAI

Fair for packaging and plants.

### GULFHOT

08-10/11/2022 

DUBAI

Fair of hospitality.

### GULFOOD

20-24/02/2023 

DUBAI

Fair for food and hospitality.



# EXHIBITIONS 2022-2023

## **IPACK-IMA**

**03-06/05/2022** 

**MILAN**

Exhibition for the packaging industry.

---

## **MACFRUT**

**04-06/05/2022** 

**RIMINI**

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

---

## **SPS/IPC DRIVES/ITALIA**

**24-26/05/2022** 

**PARMA**

Fair for industrial automation sector.

---

## **HISPACK**

**24-27/05/2022** 

**BARCELONA**

Technology fair for packaging.

---

## **MECSPE**

**09-11/06/2022** 

**BOLOGNA**

Fair for the manufacturing industry.

---

## **FISPAL**

**21-24/06/2022** 

**SÃO PAULO**

Fair for product from packaging.

---

## **LATINPACK**

**29-30/06/2022** 

**SANTIAGO CHILE**

International packaging trade fair.

---

## **DRINKTEC**

**12-16/09/2022** 

**MONACO**

Fair for the beverage, liquid food industry.

---

## **FACHPACK**

**27-29/09/2022** 

**NUREMBERG**

International packaging trade fair.

---

## **POWTECH**

**27-29/-09/2022** 

**NUREMBERG**

The trade fair for powder processing.

---

## **mcTER COGENERAZIONE**

**23/06- 26/10/2022** 

**MILAN**

Exhibition for cogeneration.

---

## **SIAL**

**15-19/10/2022** 

**PARIS**

Fair on food products.

---

## **SUDBACK**

**22-25/10/2022**

**STUTTGART**

Fair for bakery and confectionery.

---

## **CIBUS TEC FORUM**

**25-26/10/2022** 

**PARMA**

Fair for food & beverage technologies trends.

---

## **SAVE**

**26-27/10/2022** 

**VERONA**

Fair for automation, instrumentation, sensors.

---

## **SIMEI**

**15-18/11/2022** 

**MILAN**

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

---

## **ALL4PACK**

**21-24/11/2022** 

**PARIS**

Exhibition about packaging technology.

---

## **INTERPACK**

**04-10/05/2023** 

**DÜSSELDORF**

Technology focused on packaging, bakery, pastry technology.

---

## **TUTTOFOOD**

**08-11/05/2023** 

**MILAN**

Fair B2B show to food & beverage.

---

## **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.

---

## **CIBUS TEC**

**24-27/10/2023** 

**PARMA**

Fair for food & beverage technologies trends.

---

## **BRAU BEVIALE**

**14-16/11/2023** 

**NUREMBERG**

Fair of production of beer and soft drinks.

---

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**PROCESSING SRL**

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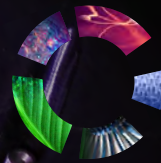
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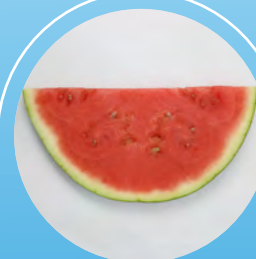
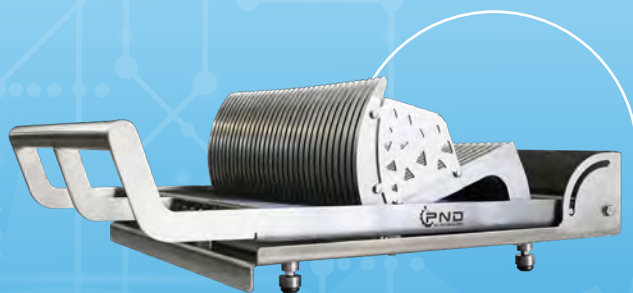




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