

# FOOD

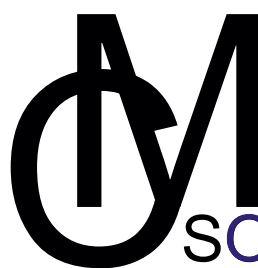
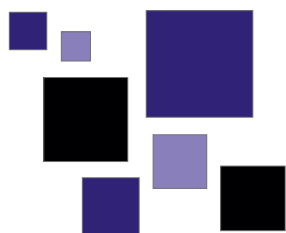
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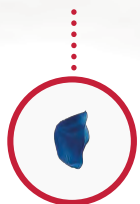


- Meat shaver
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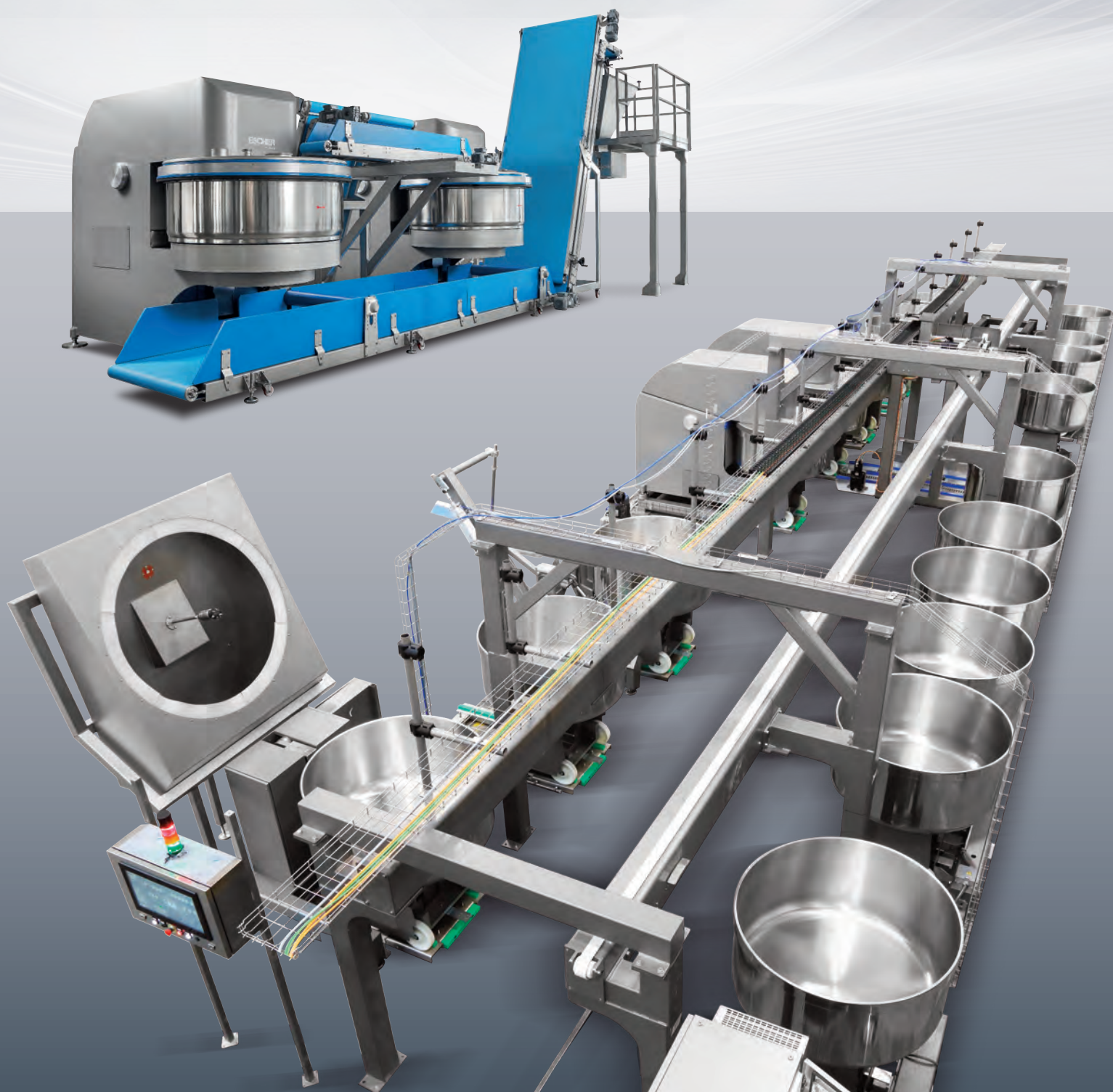
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SONIA V. MAFFIZZONI  
*Editorial Manager*

What do consumers get from the product which they've purchased, whether pre-packaged or from the butcher counter? Definitely quality, taste, and carefully selected cuts. But they'd never imagine how much research there is behind their purchase.

Meat processing technology is a behind-the-scenes aspect that consumers have no awareness of, but which is essential for both the quality of the product and its safety.

The very high skill level, the ability to innovate, and the processing and preservation technologies used translate, literally, into health for consumers.

To those who work in the industry, all that's left is to accept the silent challenge and focus on innovation as a force for constant change, which can't be seen, but can certainly be felt.



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## AFRICA FOOD MANUFACTURING

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**EDITRICE**  
**zeus**



# FOOD PROCESSING

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## “ SPIRIT OF OPTIMISM AHEAD OF IFFA 2022: NEW PERSPECTIVES FOR THE MEAT AND PROTEIN INDUSTRY ”



IFFA welcomes trade visitors from all over the world in Frankfurt am Main from May 14 to 19, 2022. Source: Messe Frankfurt

**T**he outlook for the meat and protein industry and its suppliers is positive despite difficult underlying conditions. German production of process technology for this sector rose to a peak in 2021, and exports were also at a record level despite the pandemic. The German butchery trade also reports a high willingness to invest. At IFFA in Frankfurt am Main, 860 exhibitors from 44 countries will showcase innovations for processing, packaging and selling meat - and increasingly also alternative proteins.

One of the biggest food industry segments will meet from 14 to 19 May at the leading international trade fair IFFA – Technology for Meat and Alternative Proteins

– in Frankfurt am Main. For six days, the focus will be on the safe and sustainable supply of healthy proteins – be it meat or plant-based protein – to a growing world population. 860 exhibitors from 44 countries will present their innovations from the last three years: Technology for processing and packaging, ingredients as well as innovations for sales.

The traditionally high internationality of IFFA will also be achieved this year: 58 percent of the companies come from abroad. Strongly represented, after the German companies, are exhibitors from Spain, Italy, the Netherlands, Poland, France, Denmark and the USA.

Wolfgang Marzin, President and CEO of Messe Frankfurt: “IFFA is our second trade fair event here in



IFFA

14. – 19.5.2022  
Frankfurt am Main



Frankfurt, and it's going to start off an intensive trade show year 2022 after a long break. We are delighted with the great response from the industry, which unites here with forward-looking solutions for sustainable and healthy nutrition for a growing world population. IFFA comes at the right time – that's what everyone involved tells us: There are important topics to be discussed, and the industry needs the innovation boost for its business. With the new theme of alternative proteins, IFFA is positioning itself as the world's leading trade fair, clearly setting the trend and, thus, also reflecting current consumer behaviour."

### **A powerful presence of the industry on its most important platform**

Current key figures paint a positive picture of the meat and protein industry: As reported by the relevant trade association within the VDMA, German production of food processing and packaging machinery increased by seven percent in 2021, almost returning to the pre-crisis level of 2019. Strong domestic demand and exceptionally high sales of machinery to the USA underscored the good development. By contrast, the continu-

ing disruptions to supply chains and bottlenecks on the materials and procurement markets

were and still are a brake on the economy. Klaus Schröter, Chairman of the IFFA Advisory Board and Chairman of the VDMA Meat Processing Machinery Division, says: "We are very pleased that IFFA 2022 can take place on the scheduled date. All exhibitors will show numerous innovations for the efficient and sustainable production and packaging of meat and alternative proteins. We are also particularly looking forward to the personal exchange with the trade visitors from all over the world."

The German butchers' trade, one of the most important visitor groups at IFFA, wants to invest in automation and digitalisation, especially against the backdrop of staff shortages. According to a recent survey of members of the German Butchers' Association (DFV), just over 50 percent of artisanal butchers are planning above-average investments in 2022.

Herbert Dohrmann, President of DFV: "At IFFA we will once again find technological innovations that will help our businesses move forward. We need innovations





that help to save energy and protect the climate, facilitate work processes, increase the quality of our products and retain customers or even win new ones.”

### **Growth area alternative proteins**

For the first time in its 70-year history, IFFA is expanding its product nomenclature and is presenting technologies and solutions for plant-based meat substitutes and alternative proteins. In doing so, it is following up on the trend towards plant-based meat alternatives, which is recording high growth rates. In a recent study, the U.S.-based Good Food Institute projects that sales of plant-based meat substitutes will account for about six percent of the global meat market by 2030. Currently, Western Europe is the world's largest market for those products. Established companies in the food industry have recognised the importance of the sector and are investing in the segment accordingly. Sales of plant-based meat substitutes in the European retail sector were 2.3 billion euros in 2021 – 19 percent more than in the previous year<sup>1</sup>. Over 200 exhibitors at IFFA offer products for the production of meat alternatives. In addition, there will be further information on this forward-looking topic in the supporting programme. New partners of IFFA, such as the Federal Association for Alternative Protein Sources Balpro, the Good Food Institute Europe and the nutrition organisation ProVeg, will contribute their know-how.

All information about IFFA at **[www.iffa.com](http://www.iffa.com)**

exhibition grounds. The Group employs approximately 2,300\* people at its headquarters in Frankfurt am Main and in 30 subsidiaries around the world. In 2021, the company had to contend with the challenges posed by the pandemic for the second consecutive year.

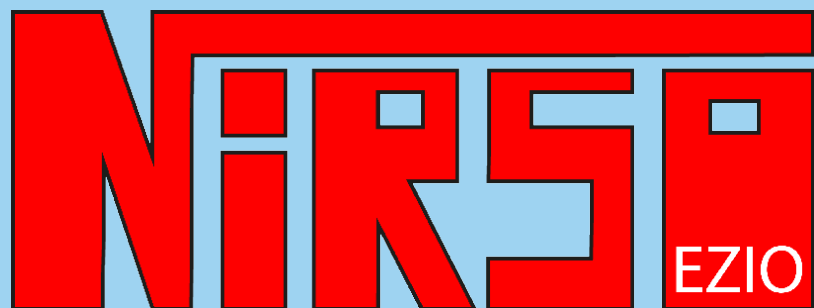
Annual sales will be approximately €140\* million after having been as high as €736 million in 2019 before the pandemic. Even in difficult times caused by the coronavirus pandemic, we are globally networked with our industry sectors. We have close ties with our industry sectors and serve our customers' business interests efficiently within the framework of our Fairs & Events, Locations and Services business fields. One of the Group's key USPs is its closely knit global sales network, which extends throughout the world. Our comprehensive range of services – both onsite and online – ensures that customers worldwide enjoy consistently high quality and flexibility when planning, organising and running their events. We are expanding our digital expertise with new business models. The wide range of services includes renting exhibition grounds, trade fair construction and marketing, personnel and food services. Headquartered in Frankfurt am Main, the company is owned by the City of Frankfurt (60 percent) and the State of Hesse (40 percent).

For more information, please visit our website at:

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

\* Preliminary figures for 2021



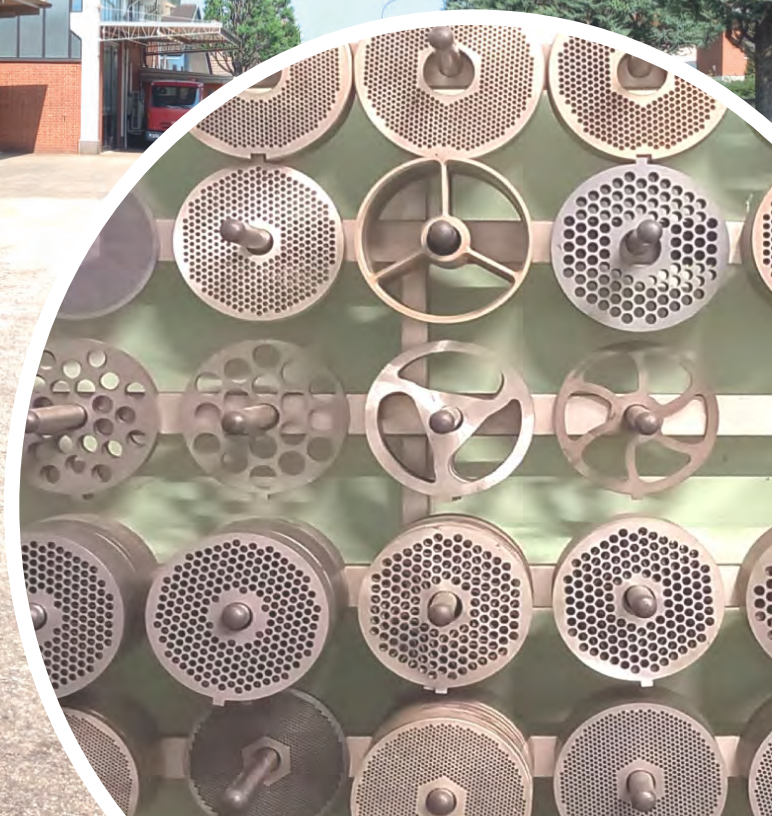


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## NIRSO EZIO: since 1969, an Italian excellence

*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**  
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**NIRSO**  
di Nirso Dario e Marco snc

**(50)**  
**1969-2019**



# The MOTORS DRIVING the food industry worldwide

**T**he food industry is multi-sector and uses the most diverse equipment in production processes. For example, it includes machinery for **mixing substances or liquids, kneading or capping** or motors for driving **meat clippers**. But that is not all. There are also requirements for **motion** with devices for **driving-dragging, lifting or wrapping**, or for **actuating** mechanical parts, and **utensils** are also often used for processing food by hand.

However, what does such a diverse range of machinery have in common? The person who can tell us is Nicola Bacchetta, sales and marketing director of Fiam, which for over 70 years has been the most modern and dynamic Italian company producing the industrial air motors used in these different applications, and more.

## To be more specific, what machines/processes are we talking about?

There are many food industry applications, but I can summarise the machines that today use our air motors. The applications currently covered by Fiam are:

- Meat shavers and slicers
- Fish deboning machines
- Dairy equipment
- Bottling, capping and filling machines
- Coating and wrapping machines
- Machinery for mixing substances or liquids
- Kneading machines
- Machinery for sausage processing (for example casing spinner devices)
- Clipping machines
- Feed/drive/lifting devices

## Why is air technology the best fit for the food industry?

In this sector, air technology is preferred over electrical technology due to **safety issues** related to the water and humidity that is always found in production sites, and because its versatility makes it ideal for countless customisations.

Still comparing safety aspects with electrical technology, air motors can withstand repeated starts and stops during operation compared to electric motors of equal power and they will not overheat when they stall: air motors actually cool down while running, thus preventing any risk of short circuit.

The size of air motors already gives them a head start with respect to electric motors of equivalent power: their compactness and limited weights makes them about one quarter smaller and therefore easier to install on any machine.

Furthermore, in addition to being extremely efficient even at low supply pressures, they have basic parameters such as torque, speed and direction of rotation that can be controlled and modified simply and without the need for control units as in the case of electric motors.

To finish the comparison with electrical technology, it is important to note that air motors **consume one third less energy** than electric motors when stopping and starting frequently during a productive shift: a key factor with the increasing focus on consumption that every company is forced to face nowadays.

Finally, other factors that make the vane motor one of the most popular technologies still today are its ver-

satility of use and robustness, which guarantee long-term durability even in the most severe conditions of use or in situations with high radial and/or axial loads, as well as operating reliability in any situation.



Stainless steel air motors, resistant to corrosion, water and humidity.



*Fiam, which for over 70 years has been the most modern and dynamic Italian company producing the industrial air motors*

**Specifically, what are the main benefits of air motors for food machinery?**

As mentioned before, food-processing environments contain a great deal of moisture, and water is used constantly

for cleaning and sterilising. This means that the machines, and therefore the motors they contain, must have the following characteristics:

- **Certified IP67 protection rating, which prevents water/**
- steam/dust from entering the motor and damaging it**
- Safety and operational reliability even at **high temperatures**
- High **resistance to corrosion from corrosive chemicals or**





Air motors can be used in working environments where there are high temperatures and where they need to be hermetic to the ingress of dust and fumes.

**detergents**; in this regard, galvanically treating internal components and the external body of the motor make them highly resistant to aggressive agents

- Made from **high-quality steels** that meet ISO standards
- Have **gears lubricated** with food-grade lubricant
- External surfaces without pockets or cavities where dust and dirt can build up, with at least **40% less roughness** to make cleaning and sterilisation easier
- Internal linings with special treatments to reduce vane friction and increase **motor service life** with **little or no lubrication**, depending on the target environments.

**We talked about customisation before.**

**What levels can be achieved?**

We have seen that the size factor is

decisive for use in machinery, and customisation is often necessary, not only regarding the size/weight of the motor, but also tailor-made clamping and output shafts adapted to the application.

However, many other **customisations** can be made: from the material types used to make the motor, such as specific food-grade stainless steels or plastics, to customised performance parameters such as power, very low speed operation or non-lubricated air supplies, an indispensable condition in the food sector.

The value added by Fiam customisations, however, is the ability to create "unique" solutions, which are often conceived through co-engineering together with the customer. This is a very important distinguishing aspect, and our R&D department has engineers dedicated solely to motor design. To-

gether with the Product Managers and Sales Engineers, these engineers are part of a fast and coordinated staff focused on managing these orders.

I say this because, in addition to air motors, our company also designs and manufactures industrial, manual and automatic assembly systems with air and electrical technology, as well as a large number of air tools for industrial maintenance.

### **Why choose Fiam air motors?**

The first answer that comes to mind is a source of pride: we have been manufacturing air technology for over 70 years, and to date we have designed and built over 1.5 million air motors, which are working all over the world. Over this long period, we have consolidated an extraordinary experience in this technology, solving many applications in a range of industrial sectors. We continually make this

know-how available to our customers, and it is a factor that makes the difference, since together with a mix of cutting-edge production technology, efficient service and affordable price, we offer a truly unique and competitive range of products and services.

Another important reason to choose us is "Made in Italy": our air motors are designed and manufactured in Italy, entirely at our production site in Vicenza, where there are departments dedicated exclusively to making motors and prototypes.

It is precisely this **short production chain** that allows us to fulfil **even the smallest customised runs** in short times. Moreover, we have over 1000 standard models in our catalogue, which can cover most of our customers' requirements. When choosing, our customers know that they can count on dedicated Product Managers with acknowledged extensive experience, which means they can fully un-

derstand every application need.

Finally, there is an increasingly critical factor: consumption. We have already said that air technology offers savings compared to electrical technology of equal power, but it must also be emphasized that consolidated design experience, machining accuracy and continuous investments in the most advanced machinery ensure that our air motors operate continuously for thousands and thousands of cycles. Our air motors are assembled and coupled with tolerances in the order of one thousandth of a millimetre. This results in the greatest efficiency optimisation: the compressed air does not leak and air consumption extreme-

ly low, ensuring lower maintenance and repair costs and highly functional and profitable investments.

### **What are your distribution channels and service levels?**

I have already talked about the short internal production chain and the dedicated Fiam team that allows us to control the cycle of each order step by step. Regarding the distribution, we have two branches operating in France and Spain and we can count on a dense network of distributors in 80 countries worldwide, which are committed to ensuring a local pre- and post-sale service. 🏢

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# MACHINES and PLANTS for food industry SINCE 1976

**F**ava Giorgio Axel designs, develops and builds machines and plants for food industry since 1976.

Clients' needs are analyzed to create functional and customized machines that are suitable for the space, the logistics and the structure of customers' factory and that satisfy customers' requests. Safety, sanitation, ergonomics, energy saving are essential in all Fava Giorgio Axel projects.

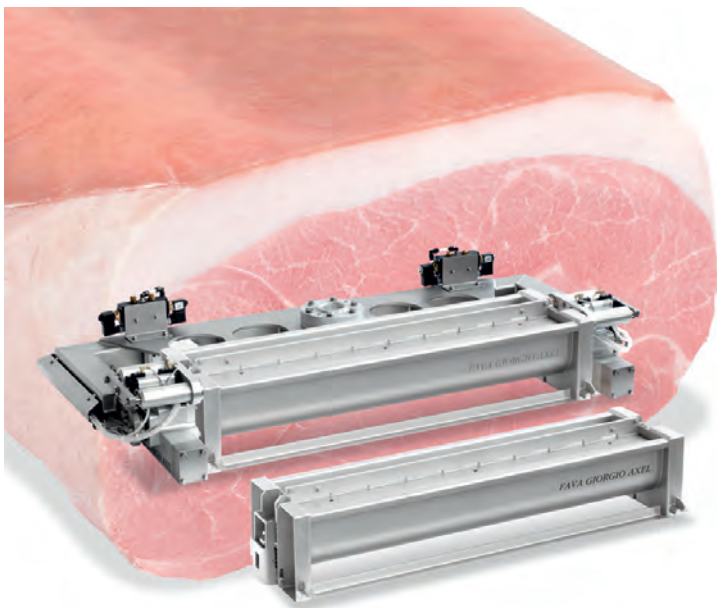
Fava Giorgio Axel internationally patented an original system called LEGOSTAMPO to rationally produce cooked products, whole or in bars to be sliced. It fits all needs and production technologies, from molding to de-molding, including the new water cooking and cooling plants and the packaging and pasteurization lines. The LEGOSTAMPO SYSTEM is flexible, versatile, ergonomic, efficient and permits to reach slicing yields unattainable with other systems. It uses only stainless steel molds that can be handled even singularly. The molds are made on customers' needs and they can be stocked both in piles and on trolleys. The plant can be used for traditional products, for under vacuum cooking, both steam or water, for no weight loss and for weight loss till 18%.

Fava Giorgio Axel also produces machines for moving hung products as salamis, bacon and ham. The loading and unloading technology TFRC, patent protected, is really flexible and, above all, it needs very small space, it's the most contained system all over the world without losing the loading capacity. The loading machines can be fed by BARS LOADERS, both automatic and semi-automatic, with hung









products and they can feed, even with single loads, the peeling, the slicing and/or the under-vacuum packaging lines.

The project of Fava Giorgio Axel kebab skewering machines arises from the need to have machines easy to clean, that can be used with different products, that can change with the different production needs, not bulky, not noisy and inexpensive. The machine makes different types of kebabs and it has a productivity that can vary from 1800 to 7200 kebabs per hour, depending on the model, on the operators' number and on the complexity of the product to realize. It can use sticks having different diameter and length, with or without protruding tip and it can also have a pre-piercing unit for more compact and resistant products. It's made of stainless steel and plastic material for food contact. It has electro-pneumatic working and control, a brush-less motor for the maximum precision and speed. A PLC, inside a stainless steel box, manages the machine that can also have a router for remote maintenance and control.

Fava Giorgio Axel Kebab skewering machine is extremely reliable and easy to service as well as easy to clean. The operator panel is simple and intuitive, it permits to adjust the production fre-

quency on the machine dimensions and on the kebabs complexity.

The structure is modular, in a way to increase the number of operators that load the products molds to make the kebabs, so that the machines can grow together with the customers production needs. The custom made molds are easy to pull out, for a simple sanitation

with suitable washers, consequently easy to substitute to produce kebabs with different number of pieces, with different shapes and different lengths. The sanitation is simple not only for the detachable molds, but also for all the machine with special attention to the molds conveyor belt.

The machine can be equipped with many optional as the finished kebabs receiving belt, the automatic kebabs insertion device in preformed trays to be thermo-sealed and the molds conveyor belt inner side washing device.

Fava Giorgio Axel production range includes a pneumatic model named SPDP and modular, electronic models called SPDE. This year latest product is the SPDE-ERA device (that has to be connected to SPDE machine) to orderly pull the kebabs out and to put them automatically inside plastic or polystyrene trays or directly in one-way thermo-forming machine trays. 🏠

**[www.favagiorgioaxel.net](http://www.favagiorgioaxel.net)**







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### Highlights:

- Delicate removal of residue without altering the surface of the salumi.
- Automated movement systems, including loading and unloading, using overhead rails or AGV.



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# The (re)discovery of hygiene, health and safety connection with **COLUSSI ERMES**

**T**he whole world has a new awareness: the connection between hygiene and health cannot just exist but must be tangible.

How? This is Colussi Ermes' starting point. This company specialized in food-industry washing systems has seized the opportunity to renovate their Mission, which has always aimed to pursue perfection in terms of hygiene and sanitization.

Colussi has done so trying to strengthen the concept of safety in the food-industry world. During such an intense period, many food-production companies faced the demand to comply

with new strict standards. No one knows this better than Colussi Ermes who has met many new requests coming from its clients: ranging from the meat to the dairy industry, from the confectionary field to fruit and vegetable production, from the poultry sector to fish industry. How can safety be increased during the food production and washing cycle? With solutions

that allow to reduce cross-contamination risks thus protecting consumers and also with the kind of care for every detail that distinguishes Colussi Ermes. Machine design, energy consumption reduction, water and detergent use, cycle automation, loading/offloading automation and the parameter monitoring in compliance with HACCP rules are just a few of the features that combined in a single washing system make the difference.

The CIP (Clean in Place) self-wash programs are an example of this. Their goal is to protect and depurate the production lines from organic and inorganic contaminating agents. Thanks to this automatic system – that involves all of the machine circuits, walls and key points and that is performed with pre-set pressure and temperature including also a final rinse and sanitization phase – companies can reach the high safety standards that are required.

Colussi Ermes exports all over the world, extensively in many countries. Europe, North America and Australia are the main markets where the most important sales targets are constantly reached. Furthermore, with the aim of strengthening the efficiency in the American market, Colussi Aws Inc. has been established in California, together with an all-American brand.





### Saving resources

Large and small companies working in the food market and using COLUSSI ERMES machines have been able to achieve extraordinary advantages such as:

- dramatic energy and chemical savings
- environmentally friendly wash operations
- reduced wash time vs. very high hygienic and sanitary standards
- increased production capacities and safety
- better working performance of their staff

### IFFA 2022

At IFFA 2022 Colussi Ermes will propose the best solutions for sanitizing salumi, ideal for processing salumi of different types in a tunnel or on racks. Automatic and highly versatile systems for washing and sanitizing meat trucks, with a washing capacity of 15 to 200 trucks/hour, are also among the range of products you will find on display. Colussi Ermes is continuously innovating to improve your safety. 🏢



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



## “ ROLL-IN INDUSTRIAL BLAST CHILLER & FREEZER MOD. AS ULTRA-FRIBOX ”

### Fields of application

Catering and food industry in general

### Description and strong points

Roll-in blast chiller and freezer suitable for any size of trolley. It allows the following cycles, to stop the bacterial alteration of the products, in compliance with the sanitary standards:

- blast chilling from +80°/+90°C to +3°C;
- blast freezing from +20°/+25°C to -18°C;
- blast chilling/freezing from +80°/+90°C to -18°C.

Each function is either controlled by product probe or timer. Several standard models are available, up to 10 trolleys, with possibility of customization.

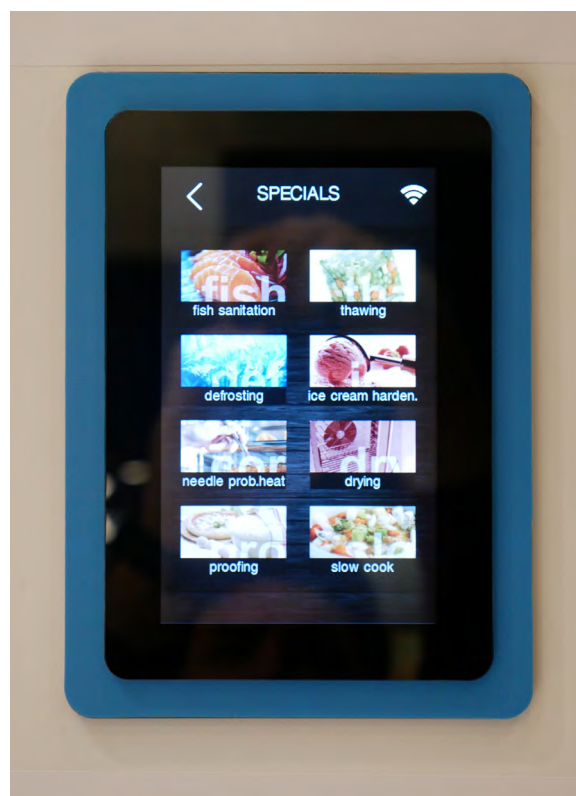
Each model is available with several refrigeration capacities, for different freezing productions. Great production capacity with very low energy consumption.

Additional functions are:

LOW TEMPERATURE SLOW COOKING, THAWING, NATURAL PROOFING, ICE CREAM / GELATO HARDENING, DRYING.



**FRIGOR-BOX®**





Including Aircare Box sanitization system by ionization.

### Technical specifications

- inside cladding stainless steel Aisi 304 scotch-brite, smooth finish
- outside cladding white PVC-coated galvanized steel, smooth finish, or stainless steel
- panel thickness 100 mm
- hygienic fully radiused floor and ceiling joints
- hinged door at the front with frame heating
- possibility to have stainless steel cladding on both sides
- split refrigeration unit with 2-stage semi-hermetic compressor for temperature down to  $-40^{\circ}\text{C}$
- standing air coolers which can be opened for inspection and washing, hot gas defrost
- possibility to operate up to 8 hours without defrosting, fin pitch 12 mm
- HACCP touch-screen controller, built in the door, with large capacity for storing recipes
- bumpers for racks, pressure relief vent
- also available as blast chiller only at positive temperature

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





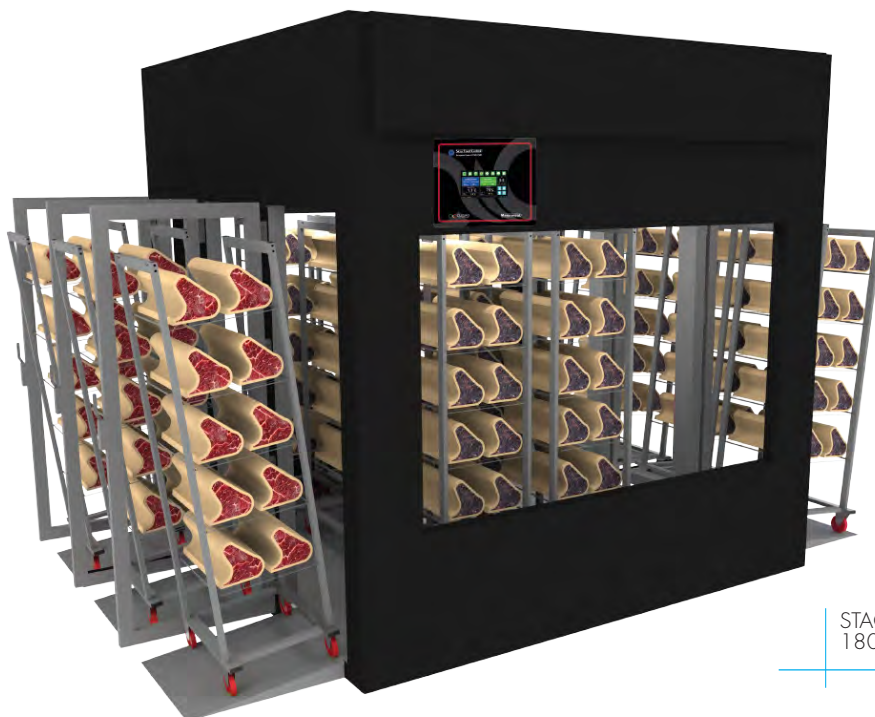
**Stagionello®**  
STORE

by:



**FRIGOR-BOX®**

## PROFESSIONAL SYSTEM FOR THE CURING, MATURING SMOKING AND COOKING WITH VERIFICATION AND CONTROL OF THE PH



STAGIONELLO® MEAT MATURING DEVICE  
1800KG



STAGIONELLO® FISH CURING DEVICE  
800KG





# OUR PAPER DIVISION



## Security and flexibility

- The patent of the exclusive continuous flange guarantees a perfect weld integrity.
- It does not need a mold change if compared to a traditional plastic trays.

## Sustainability

- Up to 80% less plastic than traditional trays.
- It can be recycled in paper thanks to the Aticelca B certification (according to the Italian Law).
- Easy separation of the film from the tray

## Full customization

- Inside and outside of the tray, with a print up to 5+5 colors



## Innovation

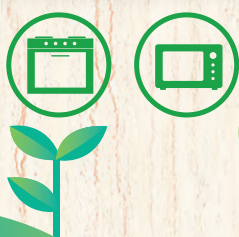
- Our paper-based packaging solutions meet functionality and performance of plastic trays.

## Applications

- Refrigerated and frozen meals, with re-heating in the microwave or in a traditional oven.

## Customization

- Externally customizable with offset printing up to 5+5 colors.



**FRESHNESS**



**ECO-SUSTAINABILITY**



**MULTIFUNCTIONAL**





# SLIMFRESH



**GB** Bernucci is an historic company operating in the food packaging since 1946. In accordance with the law and in compliance with quality requirements, **GB Bernucci**, with its business partners, provides a wide range of packaging solutions and is constantly dedicated to the research and development of innovative products made of eco-friendly materials that comply with its Mission: **Food Safety, Respect for the Environment & Search for innovative packaging.**

## SLIMFRESH

One of the most extraordinary products that **GB Bernucci** offers is **Slimfresh**: it is an innovative and environmentally friendly packaging solution, made of a laminated cardboard base with a food liner and coated with a top as a second invisible skin around the product. This coating offers the possibility of

extending food shelf life, ensuring freshness and time lasting. Recycling and sustainability are the guidelines of this new eco-friendly packaging: with a simple gesture you can remove the paper from the film ensuring an efficient recycling. **Slimfresh** is indeed recyclable with paper.

The versatility of the product and its immediate display are the strengths of his new packaging. In addition, thanks to a completely customizable paper based with four colour printing, it offers a new advertising solution and it also give the opportunity to pack irregular shapes for better merchandising.

Upon request, **Slimfresh** can be produced with paper branded FSC (Forest Stewardship Council). FSC, is the international NGO that established a certification system to ensure responsible forest management and sustainability in the wood-paper supply chain.

FSC issues two different certifications: FMC (Forest Management Certification) and COC (Chain of Custody).

In summary, this skin-pack is the solution to meet the various needs of the consumer, manufacturer and environment.

## PAPERSEAL

**Paperseal® is an innovative, eco-friendly and sustainable tray that offers brands and retailers the opportunity to replace Modified Atmosphere Packaging (MAP) plastic trays and Vacuum Skin Packaging (VSP) trays with a barrier-lined paperboard alternative.**

Compared to traditional trays, this new packaging allows a plastic reduction of about 90% as the thin inner layer can be easily removed and disposed separately, ensuring an efficient recycling.







This tray is recommended for cheese, fresh or processed meat, ready-made products, frozen foods, snacks, salad and fruit. The hermetically-sealed tray ensures the product remains fresh, with up to 28 days of shelf life, depending on the application. Minimum bulk and maximum advantage in one single

packaging. The exclusive sealing process leads to a perfectly sealed surface. It is possible to customize the whole surface of the tray with an offset print up to 5+5 colors, both internally and externally, ensuring a 360° communication that perfectly meets the requirements of each

customer. PaperSeal® Cook is a brand new tray technology for oven and microwave-ready chilled and frozen food applications. It has been created to match the functionality and performance of existing trays. 🏠

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





# HIGH PRESSURE PROCESSING



**T**he food industry is multi-sector and uses the most diverse equipment in production processes. For example, it includes machinery for **mixing substances or liquids, kneading or capping** or motors for driving **meat clippers**. But that is not all. There are also requirements for **motion** with devices for **driving-dragging, lifting or wrapping**, or for **actuating** mechanical parts, and **utensils** are also often used for processing food by hand.

JBT-Avure Technologies created the first commercial high pressure processing system more than 60 years ago. Today, Avure features multiple HPP systems, including the AV-X, with upgradeable, energy-efficient and space-saving designs, worldwide toll-



## Hall 8 Stand J90 & K90



ing centres and partnerships with more major food brands than every other HPP manufacturer.

Avure's expandable machines enable a producer to buy the machine that best suits current needs, and as the company grows and volume expands, the machine can be upgraded to keep up with increased demand. With Avure HPP, producers are manufacturing in record volumes, reducing shrinkage and growing their distribution overnight. Avure operates an in-house research and development facility to help partners perfect their HPP-friendly recipes plus maintains service centres around the globe to answer questions, provide on-site maintenance and spare parts fulfillment.

### Why HPP?

- **GREATER PROFITABILITY:** More than conventional processing.
- **FRESH TASTE:** Not altered by heat, chemical or irradiation.
- **CLEAN LABEL:** Aligns with consumer trends.
- **LONGER SHELF LIFE:** Drastically reduces spoilage.
- **FOOD SAFETY:** Extreme pressure inactivates pathogens.

### Why Avure?

- Most experienced.
- Highest productivity.
- Robust engineering.
- Application expertise.
- 24/7 support. 🏠

[jbtc.com/avure](http://jbtc.com/avure)



**FOOD**  
processing



Online auction Hiperbaric S.A. high pressure processing machine (HPP) in Knetzgau (DE)



Online auction weighing and packaging lines for onions in Kapelle (NL)



Online auction food processing machinery, catering and butchery equipment in Anzegem (BE)



Online auction milk powder blending and packaging lines and doypack packaging line for volumetric food products in Blonie (PL)



Online auction bakery production lines and machinery on behalf of Moilas Oy in Naarajärvi (FI)



Register for free

Find and bid

Win

Pay and pick up



# RASSPE BY CHIARAVALLI GROUP: tradition meets innovation

*RASSPE Blades the most ancient brand of blades for slicing machines was established in 1827*



**R**ASSPE Blades is a unique symbol of history and innovation: the most ancient brand of blades for slicing machines was established in 1827 and shines nowadays within the innovative environment of CHIARAVALLI Group.

Today, in fact, RASSPE Blades are a 100% Made in Italy excellence prod-

uct that joins 30 years of craftsmanship know-how with the productive strength of a multisectoral Group.

Starting from the design of each model, passing through the study of the numerous phases of production, up to their development and application, everything is based on the passion for a unique product.

Each step is the outcome of years of experience and constant innovation dedicated to refining each detail that pours into unmatched quality blades for slicing machines.

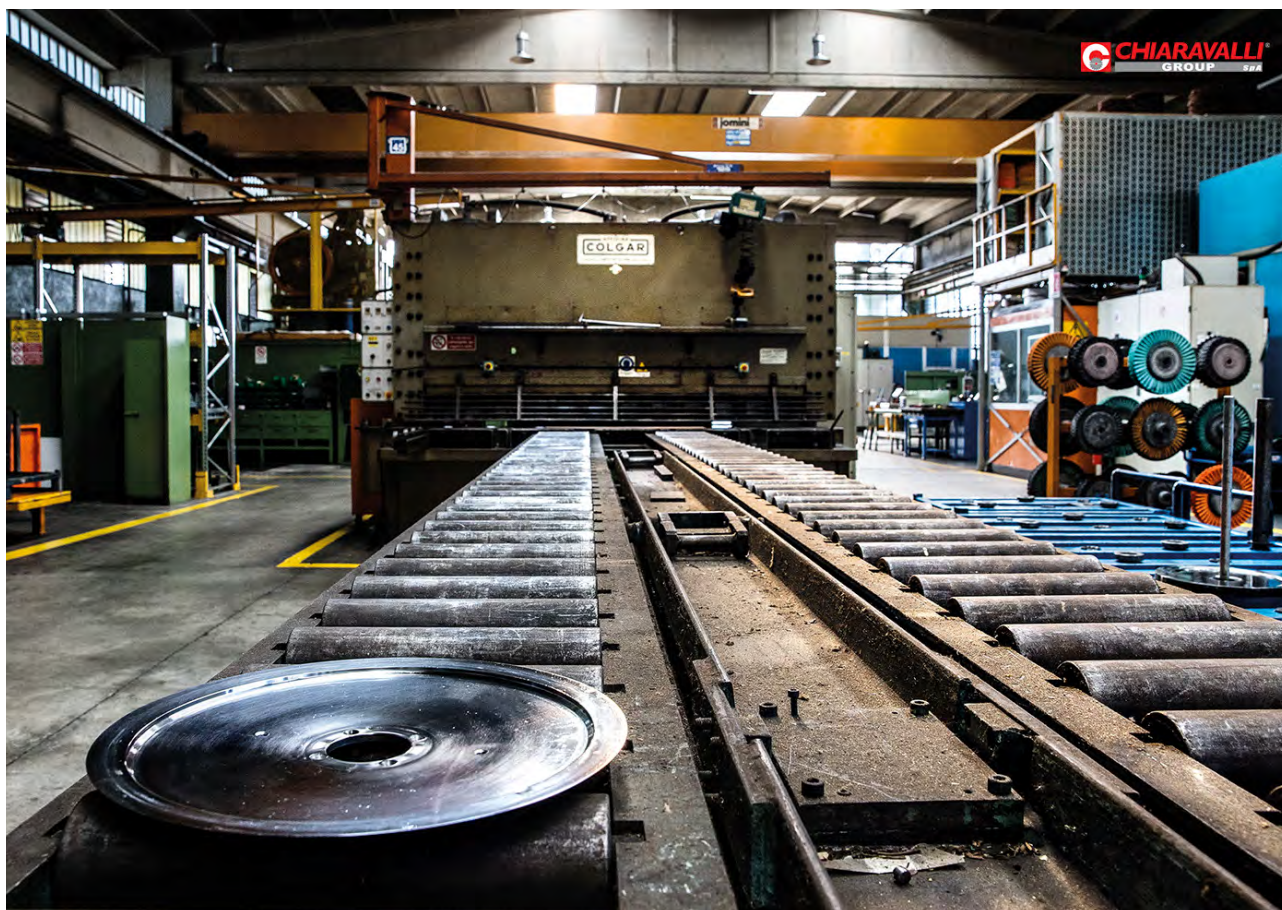
What makes RASSPE a leading player in its sector is not just quality: thanks to the latest productive machines, more than 30 000 blades are monthly pro-





DIVIS

COLGAR



duced in the group plants to grant the supply of a vast warehouse to support all customers in such a complex macro-economic context.

Serving worldwide customers, RASSPE Blades perfectly embodies the idea of a group with an Italian heart that deals on the global stage.

Such expertise within the food industries represents for the group a fun-

damental asset: RASSPE team will be leading the Food Division of the Group, founded to expand the range of products offered to the alimentary sector.

From tensioners and open transmission components to electric motors CHIARAVALLI Group manages various products that are at the foundation of the food industry machines and that thanks to RASSPE expertise

represent a tangible opportunity for growth for all the group.

Founded on past success, fueled by the actual challenges, and projected towards the future, CHIARAVALLI Group has in RASSPE one of the gems that shines and will shine even more, just like one of its stunning blades. 🏠

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





# EiQ Industrial Hygienic Design: complete solution for stainless steel enclosures

**T**he hygienic design implies benefits for the companies realizing new products in the food, pharma, chemical and cosmetic fields: quality improvement of the final product, reduced production times, decrease of costs.

## The hygienic EiQ Industrial line of enclosures is concerned by all these advantages.

This topic is more than actual considering the emergency Covid-19 but, in general, in the last years the awareness of the key role of the hygienic

design, has been considerably growing in all the sectors.

Actually in spite of the reference field (food, pharma, chemical, cosmetic) a design and a construction of machines considering the most recent indications for cleanness implies real benefits: **reduction of production time and cost saving.**

**We would like to speak about the Hygienic Design advantages and the relevant related regulations,** information

which can be useful for manufacturing companies or for final users.

By "**Hygienic Design**" ("HD"), we intend **equipment and plants designed and manufactured according to the hygiene requirements determined by the responsible organization** through guidelines, rules and directives becoming more and more stringent, to provide the highest standards.

The first **Machinery Directive** in Europe of 1989 (89/392/EEC, article 2) established:

- the **requirements according to which an equipment must be designed and constructed** to protect the operator safety;
- the **minimum mandatory requirements** for a machine **as regards to hygiene** considering that the CE marking on the machine is a declaration of conformity with obligations under the law.

**The use of stainless steel**, material widely used in the industrial field because it facilitates the cleaning operations, is the main rule for the HD, but it is a matter of only one among many aspects to be considered.

**Guidelines suggest eliminating or reducing to the minimum all gaps and not useful zones** on equipment. In such a way, it is meant to avoid that waste deriving from different working operations or dirt can deposit because these zones can hardly be cleaned or sani-





**Download the entire  
HD catalogue**

Considering all these criteria and advantages, EiQ Industrial, manufacturer of electrical cabinets in stainless steel, in cooperation with EHEDG and 3-A, has developed its own HD solution.

In particular, the company proposes a **complete range of enclosures meeting all hygienic requirements**, which includes junction boxes, push-button boxes, enclosures with hinged door, compact cabinets, modular cabinets and protective window.

tized and this can allow the bacterial proliferation.

In Europe, the EHEDG (European Hygienic Engineering and Design Group) an influential organization of producers of equipment in the food industries, **has published 42 documents including practical standard tests for the evaluation of cleanliness**, sanitation and resistance to bacteria of the food equipment.

In the American market instead, **other indications have been given by 3-A Sanitary Standards** a no-profit organization promoting the HD in the food sector.

In both cases it is clear that a design and a construction of plants according to the HD criteria, represent a

real business opportunity because it can bring these concrete advantages:

- **improvement of the quality product** as it guarantees the customer high hygiene standards during all production steps;
- **saving time** for all cleaning and sanitizing operations which results in an increased availability of plants for the production and therefore in a production cost **optimization**;
- **cost reduction for cleaning operations**.

In order to benefit from the HD advantages, the design must concern **the plant in all its parts, from components and covers, to the electric panels**.

Particular attention has been paid to **hinges, that are external** because of many construction advantages and of a better robustness and hygiene. Thanks to a long engineering study, **EiQ hinge has been patented and in June 2019 certified by EHEDG**. 

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





# Integrated processing and packaging solutions for the **MEAT INDUSTRY**

**S**ome of the lines to be shown at the trade fair will be networked, so that they can be used with the digital MULTIVAC Smart Services, as well as being completely controlled from one point via MULTIVAC Line Control.

## Packaging of burgers

Among the exhibits will be a **space-saving, high-output line for the automatic converging, infeeding, packaging and labelling of frozen burgers on a cardboard tray in a flowpack.**

The flowpacking solution is particularly suitable for quick product changes, and one of its many features is its cost-effectiveness at high output.

The use of very thin films and the absence of process-related film trim also contribute to the sustainability of this solution.

*MULTIVAC will be exhibiting its wide range of innovative processing and packaging solutions at this year's IFFA in Frankfurt. The focus will be on integrated lines, which enable meat products and alternative proteins to be processed and packaged cost-effectively and sustainably. Other highlights will be a presentation of the company's digital products, as well as its services in the areas of packaging consultancy and after-sales care.*

## Processing and packaging of sliced products

A high-output **line with slicer and thermoforming packaging machine** will also be presented as an example of the **automatic**

## slicing, infeeding, packaging and labelling of sliced vegan products.

Due to the complete integration of many modules into the packaging machine, the line offers the facility for optimising the space requirement. Thanks to the use of the spray system known as MULTIVAC Sustainable Liquid Interleaving, it is not necessary to have paper or film as interleaves.

The thermoforming packaging machine also enables the optimum packaging material consumption to be achieved.

## Processing and packaging of fresh meat

A **compact and highly flexible portioning line** for fresh meat retail packs can also be seen at the trade fair, and this line features the **automatic portioning, infeeding and packaging of the product.**

This inline solution includes a traysealer in the medium-output category.

The new and compact portioning machine, which was specially developed for the entry-level sector, ensures





that the best portioning quality and optimum yield are achieved for the product. Sustainable packaging materials, such as mono films or MULTIVAC PaperBoard, can be used on the tray-sealer.

### Processing and packaging of poultry in MAP

A highly flexible portioning line for

the automatic **portioning, infeeding, packaging and labelling of poultry** will also be shown. The proven portioning machine ensures that the best portioning quality and optimum yield are achieved for the product. Sustainable packaging materials, such as mono films, can be used on the consistently high-output traysealer.

### Packaging of meat in catering packs

A **thermoforming packaging machine** will be shown as an example of the **packaging of meat products in bulk packs**.

Here a new machine type will be used, which offers an outstanding price-to-performance ratio.

The packs are printed on the upper web with best-before date and batch number by means of a direct web printer.



### Packaging of portioned products in film pouches

When it comes to **packaging food products in film pouches**, a chamber belt machine will be shown with a **new semi-automatic loading solution**, which enables cost savings of up to 40 percent to be achieved compared with manual loading.

### Packaging of ready meals in cardboard trays

Here a **thermoforming pack-**





**aging machine in the medium-output range** will be used for producing sustainable ready meal packs.



# MULTIVAC

After the packs have been sealed, they are printed with variable data by a direct web printer, and the print image is then checked by means of an inspection system.

The use of MULTIVAC PaperBoard contributes to the sustainability of the packs and differentiating them at the point of sale.

### Thermoforming packaging line for food services

As regards the food services sector, a **compact thermoforming packaging machine in the entry-level range** will be shown, which includes a filler and produces flexible vacuum packs for goulash or soups.

The line is aimed at small to medium-sized companies, which are expanding and looking to increase their capacity, while at the same time focusing on reduced personnel costs.

### Full wrap labelling with weigh price marking

At IFFA MULTIVAC will also be presenting a new conveyor belt labeller, which not only provides attractive **full wrap labelling of packs**, but now also enables **weigh price marking** to be performed in one process on the same machine.

The labelling system features a very precise level of calibrated weight measurement, and it can be used as a stand-alone solution or in automated lines.

### Modernisation of existing machines

And last but not least, the specialist packaging company will be presenting its **MULTIVAC Retrofit modernisation service, using a thermoforming packaging machine from a previous generation**, which has been converted to the current technology and

equipped with additional functions to meet the tasks and market demands of today.

This means that the service life of an existing machine can be extended and its efficiency increased.

### Live demonstration: Portioning and slicing solutions

By visiting a **tent in the outside grounds**, customers will be able to convince themselves of the benefits of the **new TVI portioning machine**, which was designed primarily for medium-sized butcher's shops, industrial-scale meat processors with smaller lines, and wholesale suppliers. In addition to this, a MULTIVAC slicer for processed meat products and alternative proteins will also be shown in live operation. 🏠

**Visit:**  
**[www.multivac.com](http://www.multivac.com)**

# CM SOFTWARE SOLUTIONS SRL is a very young and dynamic company

**B**orn from the passion for software development. Thanks to the experience of its founder gained in over more than 15 years of activities in many IT contest, it proposes itself as a company capable of creating software that can satisfy any need.

## The most important feature of CM Software Solutions products.

is the ability to interconnect with any type of device and/or management system in order to automate the execution and data collection of the most complex production processes, minimizing the procedural and infrastructural impact.

The long experience in the food sector has allowed the company to create its







own flagship product "XSystem": an integrated ERP & MES software that implements a series of features useful for the complete automation and planning of the production process.

Traceability and Performance guaranteed throughout all the supply chain.

We asked the founder Eng. Cristian Melli why this software is better than the others: "It's the best because we are concrete people that before sit-

ting behind the desk to write software we got our hands dirty in the production environments by bumping into each other first person with real problems.

And we continue to do it every day. XSystem leads to concrete results, clear and well understandable data. It allows you to easily understand what needs to be done within the process to optimize performance and therefore minimize costs by increasing margins".

It is also the best because it is strongly focused on ergonomics of use, which expresses its highest need in the production environment.

Aware of this we have made it easily and extremely customizable, allowing our customers to minimize, if not delete, the costs related to staff training." 🏢

**Visit:**

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



## “ 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.



## IFFA 2022: Hydrosol and Planteneers present new ideas for core business and range extensions

**T**he meat industry is in a transition. Many companies face the question: Do we continue to focus entirely on meat products, or do we expand our range with plant-based alternatives? The answer isn't easy, since worldwide meat consumption will continue to grow. On the

other hand, in the western industrialised countries plant-based alternatives are increasingly in demand. Hydrosol and Planteneers, sister companies within the Stern-Vywiol Gruppe, support the meat industry with exciting product concepts that open up new potential in many different markets.

Whether all-meat, less meat or all-plant, these concepts let manufacturers react to current challenges, trends and consumer wishes.

### **Hydrosol: Meat meets vegetables**

Reducing the meat content in burger



## *Complete solutions for meat, sausage and plant-based alternatives*

patties, nuggets or sausages, and replacing it with vegetables, legumes and fibre, results in products that are a perfect match with the ongoing consumer demand for healthy indulgence. The new PLUSmulson series stabilising system compensates for the function of the missing meat proteins.

It's suitable for making many different products, and is simple to use and easy to integrate into existing production processes. "Free from" is another major trend.

In the meat category, that primarily means less salt and less phosphate.

Here again, Hydrosol has developed new concepts, for example for making phosphate-free sausages. Likewise new are clean label solutions for meat products that use natural ingredients for effective freshness preservation, appealing colour and phosphate-free brine substitutes.

At the companies' joint booth Hydrosol is presenting economical solutions for a variety of applications, like meat, ham, convenience products and sausage products. Economical production calls for solutions to counter rising raw material prices; with the drastic price increases for some ingredients, replacing raw materials is currently a hot topic, and one the Hydrosol R&D team is continuously developing new solutions for.

The objective of raw material substitution is to maintain the consistent quality of the final product within its existing price category.

### **Planteneers: Discovering new possibilities**

At the IFFA Planteneers is showing new possibilities that meat and convenience manufacturers have in addition to their core business. With the company's systems, vendors can extend their product lines with a broad spectrum of plant-based alternatives. Planteneers assists its customers throughout the entire process, from the initial idea to upscaling for large scale production.

The resulting plant-based products can be made on existing machines, reducing the need to invest in new equipment.








Among the new product ideas that Planteneers is showing at the IFFA are alternatives to chicken strips, kebab and steaks. For creative variety and additional sales boosts there are cheese alternatives, for example as filling in vegan sausages, or in plant-based convenience products like cordon bleu. A plant-based burger sauce and vegan dressings for deli salads produced cold add to the possibilities. Plant-based fish and seafoods can also open up interesting new market opportunities for meat producers. From raw fish alternatives to filets and fish fingers to calamari, Planteneers has a broad selection.

The new hybrid concepts are a special highlight, and close the gap between flexitarians and meat eaters.

For this category Planteneers has developed a stabilising system that already contains the plant protein component. This gives meat producers a simple way to significantly reduce the animal component of their final products, without adversely affecting the desired meat flavour. With Planteneers' compounds meat manufacturers can implement new ideas alongside their core business, and enter new market segments. Depending on the recipe, protein-rich pulses like lentils or chickpeas are used, along with vegetables with the right flavour.

With their new product concepts Hydrosol and Planteneers are addressing the issues of the future – international trends, food safety and sustainability. Planteneers is also a market pioneer

in digitalisation, with its new Plantbaser. This takes new product development to the next level. From idea to finished product in just two weeks is the idea, because by using this digital configurator meat producers can develop plant-based foods right on a computer to save time. Based on criteria they define, they can select the product they want to make from a comprehensive portfolio of solutions. Within two weeks Planteneers then sends a prototype of the configured product for testing. IFFA attendees can see exactly how it works in a live demo daily, and also learn what possibilities these sister companies offer, at the joint Planteneers and Hydrosol booth – Hall 12.1, Booth B 81. 

[www.stern-wywiol-gruppe.de](http://www.stern-wywiol-gruppe.de)



**STERNWYWIOLGruppe**  
WE FUTURE FOOD



### 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.



# XSpectra, the world's most advanced food production inspection system, arrives at IFFA

**T**he meat products market has a worldwide economic value of 700 billion Euro, equal to 62% of the total fresh food production. Italy in this sector represents the fourth European market behind Germany, France and Spain with a value of 21.7 billion Euro.

An industrial sector of this size and enormous economic and strategic value needs a secure supply chain with adequate quality standards to ensure safety and transparency for its consumers.

With an increasingly complex and in-

tensive food supply chain, it is not uncommon for consumers to find foreign bodies in the food they eat every day.

This is partly because the food inspection systems currently on the market are not able to meet all of today's safety requirements.



*At Iffa (Hall 5.1, E88), Xnext, the Italian deep tech company active in the food inspection sector, presents XSpectra, the world's only inspection system in the world capable of detecting low-density foreign bodies inside food products.*

For example, they are unable to detect the foreign bodies most frequently found in meat, such as uncalcified bones, cartilage, plastics and rubber.

Xnext will present XSpectra at Iffa (Hall 9.1 Stand E88), the leading international trade fair dedicated to techno-

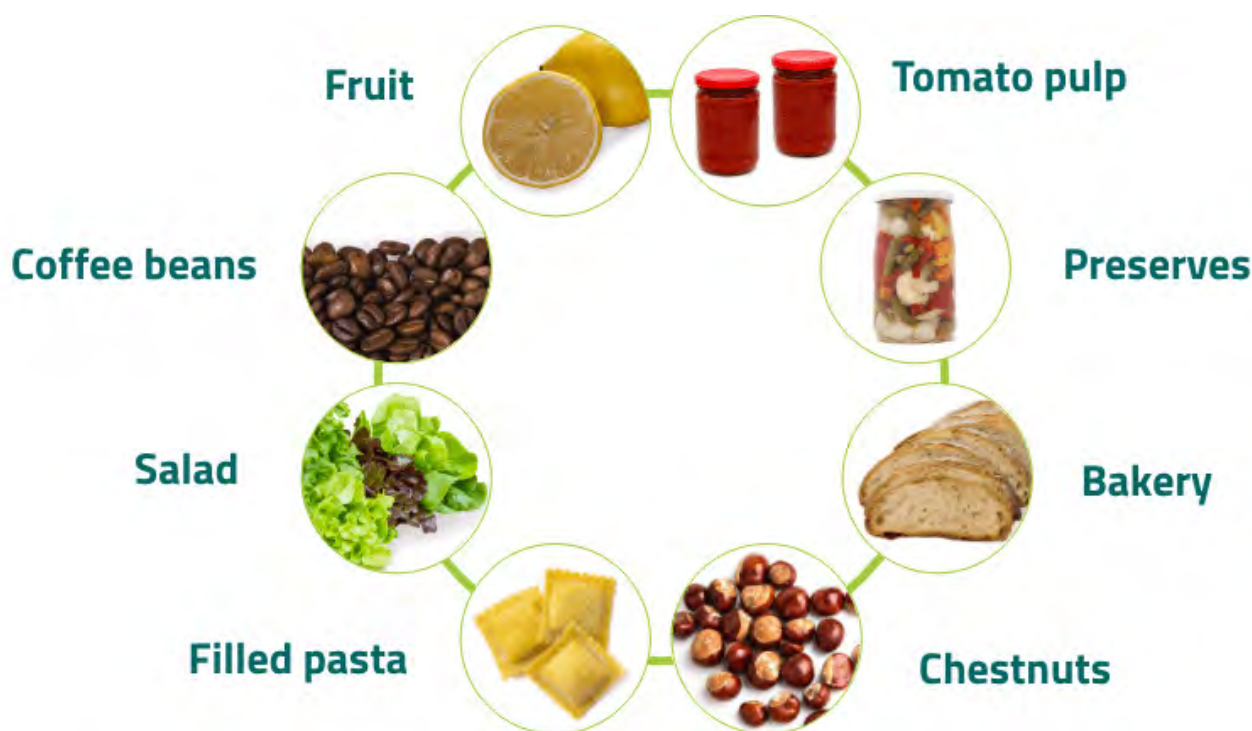
logical innovations in the meat processing, packaging and sales market, to be held in Frankfurt from 14 to 19 May.

The result of ten years of research and development and 15 million euros of investment, XSpectra, Xnext's patented

and proprietary technology, is now the world's most innovative and advanced real-time in-line food inspection system: by combining three levels of technological innovation such as photonics, nuclear microelectronics and artificial intelligence, XSpectra is able to detect contaminants that are not otherwise







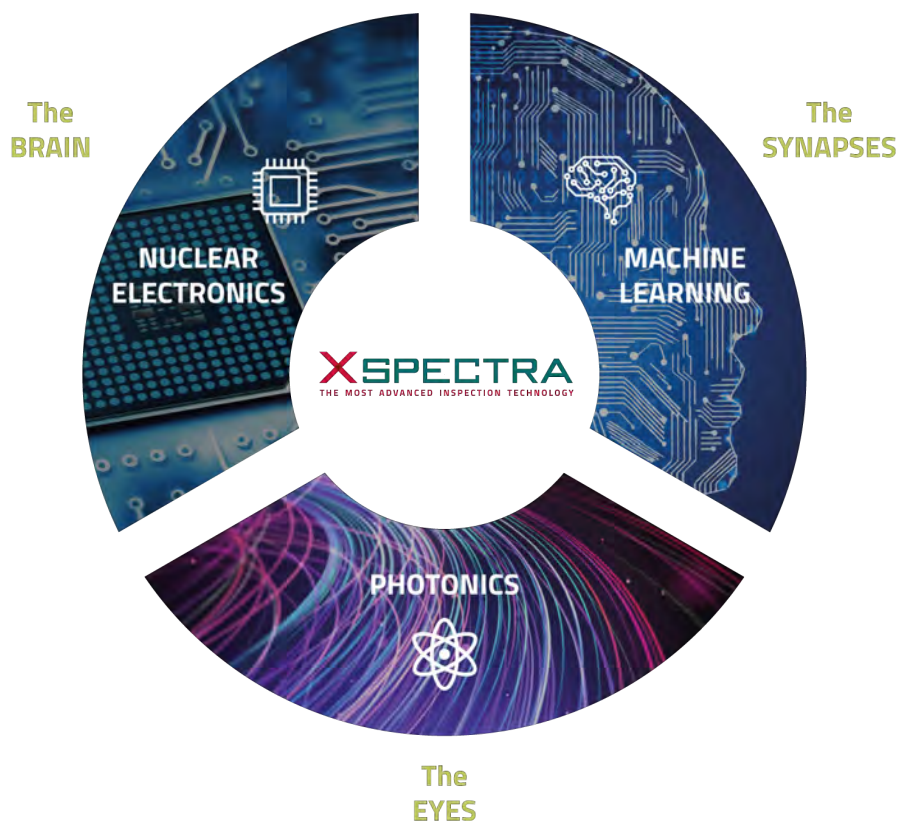
detectable today, particularly low-density foreign bodies such as plastics, uncalcified bones, insects, wood, mud and high-density foreign bodies such as stones, glass, metals.

What sets XSpectra apart from other inspection systems currently on the market is that they only exploit a fraction of the potential of X-ray inspection. XSpectra is in fact the most advanced X-ray inspection system in the world because it is the only one so far conceived that can analyse up to 1,024 energy levels for each image point on the product, compared to just one or two energy levels for competitors.

At IFFA, Xnext will be exhibiting three versions of the XSpectra, including one specifically designed for meat products and recently installed at a major Italian meat producer. This machine has a larger inspection area than the other versions to enable it to analyse bulk products in multiple rows, and can detect contaminants such as bone, cartilage, plastics and rubber in the product. 🏠

[www.x-next.com](http://www.x-next.com)

**XNEXT**  
ADVANCED INSPECTION TECHNOLOGY



## “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.





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**ifp**  
PACKAGING



# IFP PACKAGING SRL, high-level packaging quality

**O**ur main goal at IFP PACKAGING S.r.l. is to add value to the products of our customers by constantly evolving our services and systems in order to offer better packaging quality to our customers. Today, after 20 years of experience, we boast a strong spirit of innovation and continual improvement process.

Founded at the end of the 1970s as a small artisanal company offering packaging solutions designed to meet the specific needs of its customers, today IFP PACKAGING confirms its customer-oriented vision, which makes it one of the leading European companies in the production of machines for shrinkable and flexible packaging film.

Working with our company does not only mean having guaranteed a cutting-edge packaging solution, but a "future-proof" system that focuses on a wider application both now and in the future.

High performance machinery, extreme usability, strength and durability, efficient and customized solutions for any specific need, a strong customer-oriented approach – all these aspects make IFP PACKAGING not only a supplier, but an ideal and reliable partner. By providing shrinkable film packaging

solutions worldwide, we have been able to develop a unique know-how in the food and non-food sectors. This has allowed us to integrate our systems with complementary machinery such as weighing scales, labellers, loaders and filling machines in order to provide our customers with complete solutions that perfectly meet their requirements.

From our headquarters in Schio, home of many successful companies, we provide advice, service and support to our customers all over the world. We can rely on a highly qualified and committed team with a great expertise, and on more than 3800 packaging solutions to be delivered worldwide. Both our technical and sales departments are the result of a fruitful in-

teraction between senior professionals who think and behave with the spirit of a globally competitive company that wants to break through with innovation and creativity. The lab where all our mechanical components are produced employs both highly specialized staff and work centres that allow the full manufacture of the machines in-house. A team of technical testers is responsible for starting up the packaging lines and introducing the customers to the use of the machinery providing an efficient and constant support both on site and at the customers' premises. An effective and prompt assistance and after-sale service takes care of providing support and spare parts on a global level in order to maximize customer satisfaction. Among the goals that our company aims to pursue there is an attempt to foresee the future through the careful observation of the market changes. We support the customer in his decision, and provide competitive and cutting-edge solutions. Thanks to our mission more and more partners have decided to rely on us today. 🏢

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





## MODULAR CM

Fully ergonomic and modular rotary labeling machine, with a quick and easy reconfigurable layout.



Compact and robust labeling solution, available in four sizes from small to medium, up to six labeling stations.

The new solution to meet the needs of the Wine, Spirits, Oil, Beer, Food & Dairy sectors.

Solution with pressure sensitive and cold glue labeling stations, reciprocally interchangeable and replaceable in a few steps.

Modular CM is a machine that provides the highest standards of safety for the operators.

It has up/down protections that, when raised, instantly stop the machine.



# A STAR IS BORN. MODULAR CM, THE NOVELTY BY P.E. LABELLERS IN THE SPOTLIGHT OF THE MAIN INTERNATIONAL TRADE SHOWS 2022

**M**ODULAR CM is the new rotary labeling machine completely ergonomic and flexible, with its layout reconfigurable quickly and easily.

Modular CM is a compact and solid machine available in 4 sizes from small to medium, up to 6 labeling stations, perfect for glass and plastic bottles, cylindrical and shaped formats, and for partial labels – front / back, neck labels, plastic I/L/U shape tax stamps. This solution has all the features to be loved by many sectors that need a small to medium-sized labeling

machine, super flexible thanks its complete modularity, with a layout that can be reconfigured easily and quickly.

In particular this ergonomic labeling machine meets perfectly the needs of many industries: food&dairy, Oli, Beer, Wine&Spirits.

It features labeling stations with pressure sensitive technology and cold glue, reciprocally interchangeable; they are replaceable in a few steps according to any production needs.

The Modular CM is a machine that provides the highest standards of sa-

fety for the operators: it has up/down protections that, when raised, instantly stop the machine's operation.

Modular CM is in the spotlight of the first 2022 trade fairs: Enoliexpo (Bari IT, 10-12/03), BBTech Expo (Rimini IT, 27-30/03), Vinitaly | Enolitech (Verona IT, 10-13/04), Ipack IMA | Pharmintec (Milano IT, 3-6/05), Austro Vin (Tulln AT, 5-7/05), Hispack (Barcelona ES, 24-27/05).

## **P.E. LABELLERS S.p.A.**

Founded in 1974 in Mantua (Italy), P.E. Labellers is a global leader in the



## *Modular CM, the novelty by P.E. Labellers in the spotlight of the main International trade shows 2022*



design and manufacture of entirely modular and ergonomic automatic labeling machines.


The developed solutions offer all available labeling possibilities, even reciprocally combined, through independent and interchangeable machines and stations.

The company's lean production is inspired by the concept of total flexibility: with this Design Innovation approach, P.E. Labellers produces 450 machines each year, both rotary and linear, for the beverage, wine & spirits, food & dairy, but also personal & home care, pharma, chemical and pet food sectors.

Today, 10,000 P.E. machines are installed worldwide and widely man-



ged remotely thanks to continuous support and maintenance services. P.E. Labellers features a global dimension: 8 production sites distributed amidst Italy, US, Brazil and 500 employees

all over the world. The company is part of the multinational group ProMach, a world leader in Packaging. 

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



# P.E. LABELLERS™

**FOOD**  
processing



# 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 flexi-

bility, 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 de-

partment 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 provide 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 effective-

ness. 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 en-





vironmental 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. 🏢

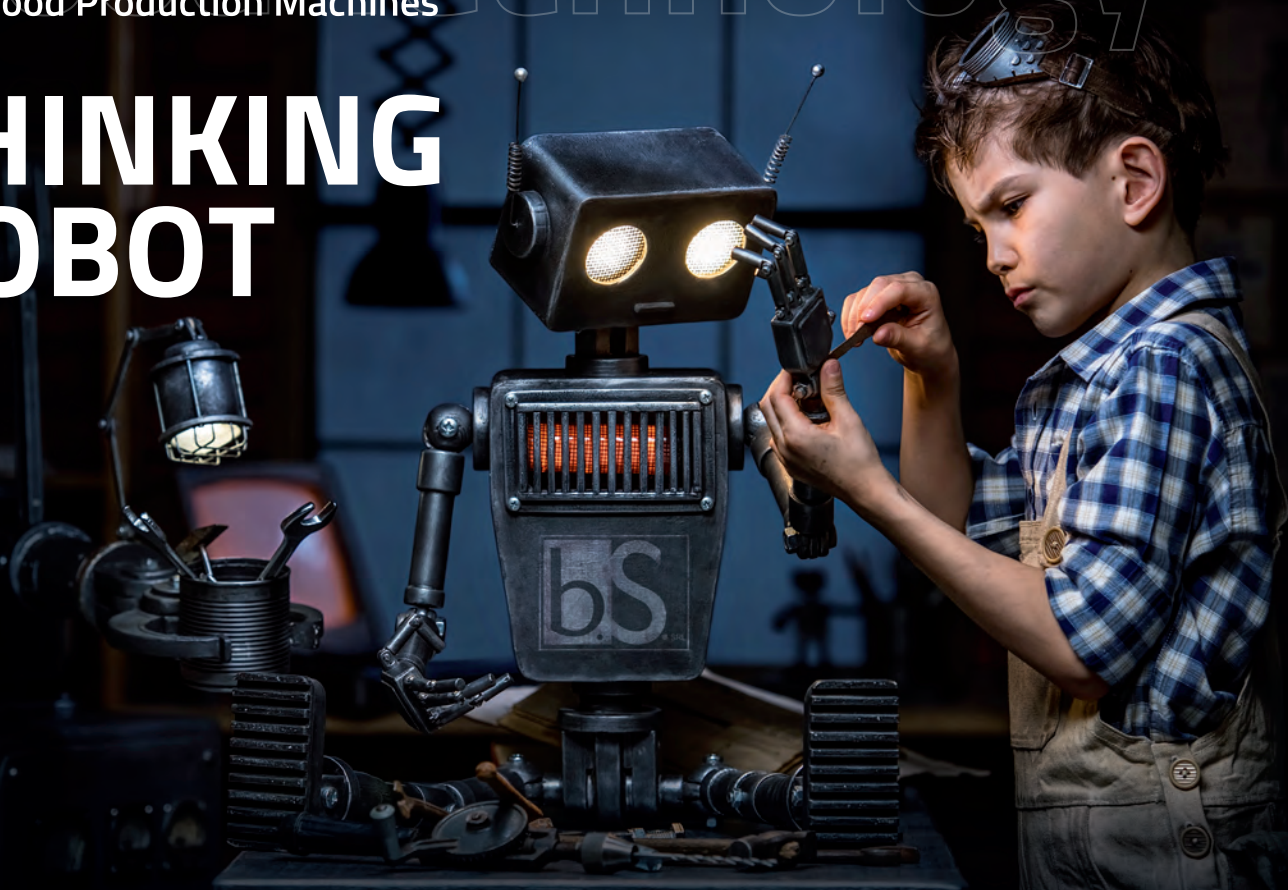
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# Food Technology

Food Production Machines

## THINKING ROBOT



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# B.S. SRL, systems and machinery for industrial food processing and automation

**BS** srl was founded in 1980 in Parma, at the heart of the Italian Food Valley and, since then, its core business has been the production of systems and machinery for industrial food processing and automation.



A growing desire for innovation, together with a consolidated reputation and



reliability have allowed B.S. to acquire and develop an up-to-date and advanced know-how in the food-tech trade.

By creating a partnership with its clients and conducting targeted market analyses, B.S. is able to identify the needs of the industry effectively and precisely, with a view to designing and producing special custom-built solutions, capable of delivering high standards of performance and product quality.

B.S. responds to a constant and exponentially rapid technological development by producing modern technological machinery with the capacity to anticipate future trends.

### OUR MANTRA HAS ALWAYS BEEN "THINK ROBOTIC"

#### BS is very proud to present the latest novelty: the "B.S. POCKET" Sandwich Line

The system can process several sandwiches at the same time, enabling high levels of productivity.

A single block containing all the mechanisms for making pocket sandwiches.

#### PRODUCTIVITY

The B.S. POCKET can produce up to 100 pcs / min. with different types of filling, from sweet to savory.

All the different settings can be saved in the recipe for easy recall.

#### HYGIENE

The BS pocket line enables fast and safe cleaning operations.

The various parts requiring sanitization can be removed without the use of special keys, or washed directly on the line.

#### FLEXIBILITY

The machine is equipped with Brushless motors on each station and dosing system.



This makes the system very flexible, allowing for optimal adjustments on each station according to the type of product to be processed.

#### HOW IT WORKS

The line is divided into 6 phases: bread deposit, 2 sauce dosing groups, sandwich rotation, slicing station, and unloading.

The bread loaded into the machine is transferred directly onto the conveyor belt by means of a special mecha-

nical arm,. When the line moves forward, it positions the bread under the two dosing stations, before proceeding to transfer it under the closing station from where it is carried to the slicing station.

The last station will unload the sandwich onto the outfeed belt, which will carry the product to the packaging machine". 🏠

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





# DON'T CHANGE THE PACKAGING DESIGN, JUST DO IT BETTER!

*Sometimes it not just all about advanced secondary packaging technology. In a recent packaging challenge, Cama Group had to apply years of experience, design capabilities and extensive domain expertise too*

**A** leading American dairy products company, which supplies retail, food service and co-manufacturing, with products including natural, processed and speciality cheeses, all in a variety of formats, recently faced a packaging dilemma due to an underperforming machine.

The company is proud of its brand and sees its packaging as a natural extension, as such the shape form and function of its multiple packaging styles is tightly controlled. Indeed, in a recent packaging project Cama Group was asked to create an identical packaging style, but with more control over the final shape and the tightness of the sleeve around the product. The product in this case was a two-

section thermoformed tray containing a dairy-based snack. These trays were to be packaged vertically in 1 x 3 and 2 x 3 arrays, using a sleeve created from a cruciform-shaped blank.

The existing packaging system was simply not performing as expected, primarily due to the fact that the packaging style had changed and the incumbent machine, although capable of fulfilling its role, was neither efficient nor offered acceptable throughput. For this reason, the company approach Cama Group for a higher performing alternative.

"Our challenge was to develop an approach that could apply the sleeve, but not too tightly," explains Davide Di Lorenzo, Sales Engineer Manager North America at Cama Group. "In order to achieve this – where tightness is normally preferred – we had to look at a completely different way of forming and combining the sleeve with the product. In effect, we had to build a solution and a complete machine around an existing sleeve blank."

Cama Group's solution took the form of a specially modified IF Series Top-Load Carton Sleeve System. Part of Cama's Breakthrough Generation (BTG), the IF Series has design and operational features that are setting the standard in secondary packaging. Their modular, scalable and hygienically designed frameworks house contemporary automation solutions – including advanced rotary and linear servo technology – which can be tightly coupled to in-house-developed robotics, to deliver the all-important flexibility and adaptability required by modern packaging operations. The machine range is also based on a digital platform that supports full Industry 4.0 capabilities, including AR, VR and virtual testing, training and operation.

In operation, as opposed to being formed around the trays, in the new Cama machine the sleeve is formed without glue or the product being present. The products are then collated and oriented into pockets on a racetrack conveyor. Groups of three are then picked up by a robot, rotated and loaded into the



pre-formed sleeves. Glue is then applied to the lateral flaps which are closed and then the top flap, which is secured by the sleeve being inverted and pressed. Using this approach equal pressure is only applied at the end and the package maintains its more-uniform right-angled corners.

Robots are used extensively in the machine for their speed, repetition, accuracy and flexibility. One robot is used for sleeve erection, a second for product loading, a third for the first flap close and a fourth for the final flap close. When the packaging array is changed the robots can be instantaneously reprogrammed for the new format.

"It sounds relatively straightforward," Di Lorenzo explains. "But this was actually a very tough project as we had to approach a fairly ordinary packaging application from a very different direction. In many projects we offer the services of our packaging-design team, but in this instance, the packaging design was not the issue, it was the packaging process."

The project also involved the design and delivery of a case packer, which took the packaged snacks from the IF Series machine. "This was just as interesting as the sleeving solution," Davide

tells us. "As we were able to call upon our packaging design team in this instance, which was able to enhance the dimension of the case, not only saving materials and but also optimising the eventual pallet-loading configuration."

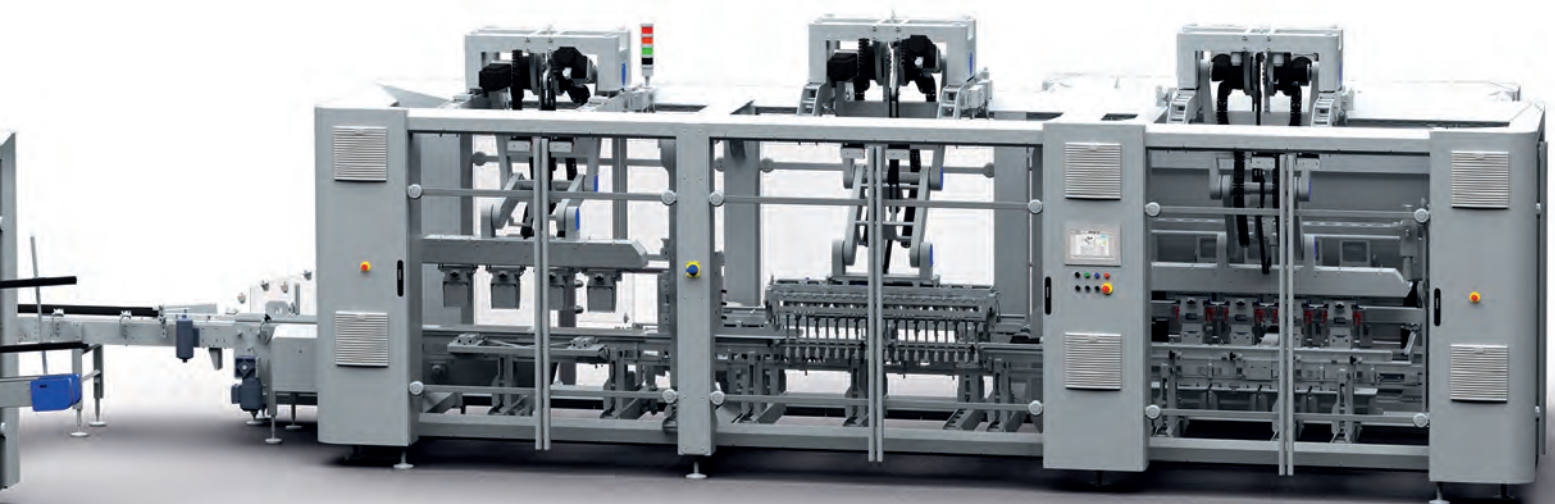
The existing solution used an American RSC case. Cama's design team developed a flat-blank-based solution, which was not only smaller – saving 43% of materials vs the RSC design, but also resulted in an extra row of four in each palletised layer – from 4 x 4 to 5 x 4. The new case design also reduced carton stock holding.

"We were also involved right from the beginning – at the system engineering stage," Davide concludes, "so we were able to give our customer all of the benefits of our digital design, deve-

lopment, test and commission approach. This digital approach also spills into machine operation, changeover, maintenance and reconfiguration, giving the customer the best possible agility to cater for changing market demands. Digitally based flexibility and agility are essential in today's market, but when they are supported by knowledge, domain experience and empathy, it becomes a much more powerful package." 🏢

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

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Innovation meets Experience





# Mondi & Henkel partner to launch fully recyclable mono-material refill pouch for Pril

**M**ondi, a global leader in packaging and paper, and Henkel are helping consumers to wash dishes more sustainably by creating a completely new reuse packaging concept. The two companies worked together on a packaging solution for Henkel's hand dishwashing products that allows refilling plastic bottles from flexible pouches.

This supports Henkel's sustainability targets of making 100% of its packaging recyclable or reusable and reducing 50% of fossil-based virgin plastic by 2025.

Since January, consumers can purchase a new keep-at-home refillable pump dispenser with refills in the lightweight, mono-material pouch produced by Mondi. The flexible stand-up pouch reduces plastic by 70% every time it replaces rigid plastic bottles and is easy to recycle where existing infrastructure exists.

Convenient and lighter to carry home, the pouch completely empties thanks to its shaped design, leaving no residue. It is soft touch with a sturdy base so it can easily stand in-store, offering retailers attractive and eye-catching on-shelf appeal while also communicating all the brand information including sustainability benefits.

Mondi's leak-proof pouch is certified according to ISTA 6, providing a highly durable packaging for both in-store and online shopping.

Muriel Joncheray, Global Key Account Manager Consumer Flexibles,

Mondi says: "Sustainability is a vital element in the homecare industry and a trend that is shaping the whole market - and rightly so.

At Mondi, we have defined sustainability goals that focus on circular driven solutions in our MAP2030 action plan. This includes a target to make

100% of our products reusable, recyclable or compostable by 2025 – just like the recyclable pouch for Henkel. Our EcoSolutions approach meant that we worked very closely with the Henkel team to create the new packaging. While the aim was to provide a solution that helped Henkel reach its



*The new packaging concept is being launched for Henkel's brand Pril in Germany. It has been certified by "Blauer Engel", the independent ecolabel of the German Federal Government*



sustainability targets, we also needed to ensure the materials and structure would protect the product in transit and on-shelf, preventing leakage and minimising waste."

Carsten Bertram, Head of Global Packaging Innovation Dishwashing at

Henkel added: "At Henkel, we recognize our responsibility related to packaging. We're committed to driving sustainable packaging and have a set of ambitious targets.

Our strategy is based around circular economy and focuses on integrat-

ing recycled plastics, reducing the amount of plastic packaging, having reusable packaging and using fully recyclable packaging concepts to close the loop.

Mondi was the obvious partner to help us with their expertise in creating the best possible solutions - for the product, the planet and the customer."

The new packaging concept is being launched for Henkel's brand Pril in Germany. It has been certified by "Blauer Engel", the independent ecolabel of the German Federal Government that sets stringent standards for environmentally responsible products and services. 

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

- Mondi has created a recyclable refill pouch enabling Henkel consumers to reduce plastic by 70% and helping Henkel to move closer to its sustainability targets
- Henkel's Pril hand dishwashing liquid is available in a 100% recycled PET pump dispenser bottle which can be re-used many times using refills packaged in Mondi's recyclable mono PE refill pouch
- The innovative pouch is light-weight, convenient to use, certified as leak-proof and highly durable even for home deliveries





# UFlex Rides High On Innovative Product Developments

**U**Flex, India's largest multinational in flexible packaging materials & solutions and a global leader in polymer sciences has been riding the waves of innovation to build packaging products, applications & solutions that will further enhance the role of packaging as a value-added responsible packaging.

In the quarter ending December 2021, UFlex unveiled a range of new products and solutions that meets various packaging needs of brands while aiding the consumers with added convenience and features. These developments affirm UFlex' 360 degree focus on brand needs, user experience, and commitment towards the environment.

Reaffirming UFlex' commitment towards responsible packaging, **Ashok Chaturvedi, Chairman and Managing Director UFlex Limited** said, "UFlex has been walking the green path by recycling post-consumer MLP mixed plastic waste;

upcycling recycled resins into our PCR films range and also creating solutions that use lesser amount of virgin plastic at source. The new high value line of products and solutions are aimed at adoption of responsible packaging and mirrors our increased focus and investments in R&D. We have already been recycling almost 30,000 tonnes of plastic waste per year with a target to reach 1,00,000 tonnes. The new recycling lines to be commissioned in our Mexico and Poland facility and the proposed recycling infrastructure in Egypt will help us realize our vision."

**Highlighted below are some of the marque products & solutions unveiled during the quarter.**

## **FLEXIBLE PACKAGING BUSINESS**

**1) 3D Bags with Perforation to Give Kids an Easy-tear Experience:** Kids unboxing their gift packs is nothing less than a celebra-

tory ritual where they seek an emotional experience in checking what's inside the pack. However, when opening the package becomes an arduous task, it dampens their spirit. UFlex' product development team responded to the brand's ask for convenience that children need to access the toys or goodies inside the pack easily and introduced a smart solution by adding one extra attachment with a perforation line on the 3D bag enabling easy tearing of the pack. This absolutely novel concept has added convenience to joy and enthusiasm of children opening the package, thus making the brand enjoy popularity amongst them.

**2) Standee Spout Pouches to Pour Out Chai:** Beverage cafes have been embracing innovations that helps them cover the last mile smoothly to deliver hot, piping tea in its most pristine state to chai-lovers. Fulfilling the need of beverage cafes to retain the temperature of tea for a



## *Launches a host of innovative products & solutions across the entire flexible packaging value chain in October - December 2021*

long duration, UFlex has developed a special standee spout pouch that delivers the comfort of drinking brewed tea and enhances users' experience. The pouch structure is made with BON and special grade PE along with 21mm spout on the top for spill-free pouring of the tea. With this pouch contained in a tea delivery box, the cafes are more confident of delivering the goodness of brewed tea at the doorstep of the consumers seamlessly.

### **3) Paper-based Packaging Laminate for Tetley Tea Bags:**

With rising concerns around packaging waste, Tata Consumer Products that wanted to make a switch to sustainable packaging for its brand 'Tetley Tea' collaborated with UFlex to supply its green tea bags in a paper-based packaging. For this, UFlex developed a packaging structure made of paper and aluminium foil with registered hot stamping feature using emerging high energy curing chemistries to deliver a

high performance and low migration product system that supports cross-linking of inks and high gloss coatings. The advanced development process at UFlex besides being environment friendly with no CO<sub>2</sub> emissions, replaces the conventional process in which solvents were used. The paper-based packaging structure can be easily recycled thereby taking the brand a step closer to its green mission and giving consumers a sense of pride in using sustainable packaging format.

### **HOLOGRAPHY BUSINESS**

#### **1) Mirror Film for Safe & Appealing Toys:**

Toys help children have fun along with catering to their developmental needs, and are often their best friend. But in a world that is crowded with different options, the toy manufacturers have a tough job of making them appealing for kids who are known to have a short attention span. To address this challenge, UFlex has introduced a mirror film for the toy segment under the 'Make in India' initiative to showcase its cutting-edge technology for toy segment applications. This new product made of soft polyester material, has been designed to incorporate various patterns to ensure learning without compromising on child safety. The mirror-like effect has been achieved with an acrylic coating on the film. Replacing the traditional glass, the toy's mirror is unbreakable, foldable and appropriate for a child's use without any worries of accidents. Due to its success in the toy segment, extending its use in fashion and accessories segment such as on handbags, wallets, shoes, etc. is being explored.

### **PACKAGING FILMS BUSINESS**

#### **1) High-barrier Metallized Recyclable BOPP Film 'B-TUH-M'**

#### **for Food Packaging Applications:**

Low-unit packs (LUP) and Multi-unit packs (MUP) such as biscuits, bakery & snacks often witness quick consumption. These packs require a packaging structure that is made using a metallized film that offers superior oxygen (<10cc/m<sup>2</sup>/day) and moisture barrier (<0.10 gm/m<sup>2</sup>/day) with robust seal performance. B-TUH-M, a high barrier and robust seal metallized BOPP film has been developed by UFlex to replace the three-layered structure with two-layers in numerous seal packaging formats especially multi-unit packs. The film offers good optics, excellent printability, and consistent slip & anti-static properties.

The high barrier film's structure imparts excellent high seal strength of 1500 gm/25 mm, hermetic seal, high & broad hot tack and low SIT. The film also offers good metal adhesion for brilliant metal appearance, good extrusion bond and excellent resistance to metal cracking. Due to its ability





to be recyclable and reduced layers in the laminate, this sustainable film is greening our portfolio even further.

**2) Multi-layered Mono-material BOPP Film 'B-TGM' with Outstanding Oxygen, Aroma & Moisture Barrier for Pouches and Bags:** Some oxygen-sensitive foods like dry-fruits & nuts need to be packed such that it helps retain its freshness and quality for long while locking in its aroma. The newly developed B-TGM BOPP is made to address the barrier requirements for oxygen, moisture and atmosphere-sensitive products. B-TGM is a special effect coated BOPP film with the best oxygen barrier delivering the least OTR ever for a BOPP film ( $<0.28$  cc/m<sup>2</sup>/day). It has excellent water barrier properties ( $<2.9$  gm/m<sup>2</sup>/day) in duplex structure, exceptional moisture resistance and low heat seal initiation temperature (95°C). The recyclable film that offers excellent clarity and product visibility is an environment friendly solution; and has properties infused into the mono-material film through a unique step proprietary process onto a specially formulated coating and base film substrate. This multi-layered mono-material BOPP film substrate is specially designed with special polymers to achieve ease of processing for the converters that consequently enhances shelf life of the packed products.



## CHEMICALS BUSINESS

**1) High-performance Sealing for Packaging with Flexbon 601A\_Flexbon 601W Adhesive:** A high opacity and two-component solvent-free white adhesive, 'Flexbon 601A\_Flexbon 601W' is best suited for food packaging such as snacks and staples that requires added strength in sealing. It is compatible with various films such as PET/MET PET, BOPP/MET BOPP, PET/MET CPP. Due to its excellent wettability that helps it maintain a firm contact with substrate, the product reduces the requirement of white ink coating substantially and delivers good optics. These factors add value to clients' products by offering optimum results that elevates the look of a printed pack considerably making them even more eye-catching.



**2) Two Component Solvent-free Adhesive, Flexbon 702A\_Flexbon 777C for Multiple Laminates:** It is a two-component solvent-free adhesive used for general to medium performance in snack packaging applications. It provides fast cure, high-run speeds with an excellent appearance to the laminates. This product offers excellent wetting on metallized substrates to give speckling-free performance on PET, BOPP, LDPE, MBOPP, MCPP and MPET based applications.



**3) Flexcure Super Glide Coating for Lustrous Looking Packs:** The attractive appearance of a clear, glossy coating is an important feature for many packaging applications. Flexcure Coating is a free-radical chemistry-based UV coating, that is applied in-line over wet or dry UV inks, or offline over dry conventional inks to impart excellent slip & scuff resistance properties. Flexcure Super Glide Coating is a great fit for fast curing in different types of food and non-food applications such as PVC sheet, mono-cartons and book titles.

**4) FlexFab HR Ink for Cement & Fertilizers Packaging:** Packaging for building materials and fertilizers require ink with sharp printability and impressions due to the intrinsic woven packaging structure. With its expertise in ink domain, the Chemicals business has addressed this challenge with FlexFab HR Ink, a solvent-based printing ink designed for printing on HDPE/PP woven packaging structures. Due to its sharp printability, high strength, excellent adhesion on laminates and scratch resistance properties, FlexFab HR Ink is highly valued by its customers.



## ENGINEERING BUSINESS

### 1) Registered Lamination Process led Machine for Clear Product Packaging:

Brands have always been exploring ways to earn consumer's trust and gain credibility for their product. One way to achieve this is to give consumers a clear view of what's packed inside via a see-through window. However, in achieving this, the aesthetic of a pack often tends to get compromised. To ensure a fine blend of giving a clear view

as well as maintaining visual appeal, the Engineering business of UFlex has introduced registered lamination process. The automated process embedded in the machine combines two films into the process that keeps track of the pre-printed mark on film on both unwinders. This process detects any errors emanating which yields a precise registered lamination product with zero defect output. During the entire process, the products' visibility & packs' aesthetics remains the focal

point. This process has already found acceptance by quite a few customers wanting to promote product visualisation. 🏢

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







# 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.

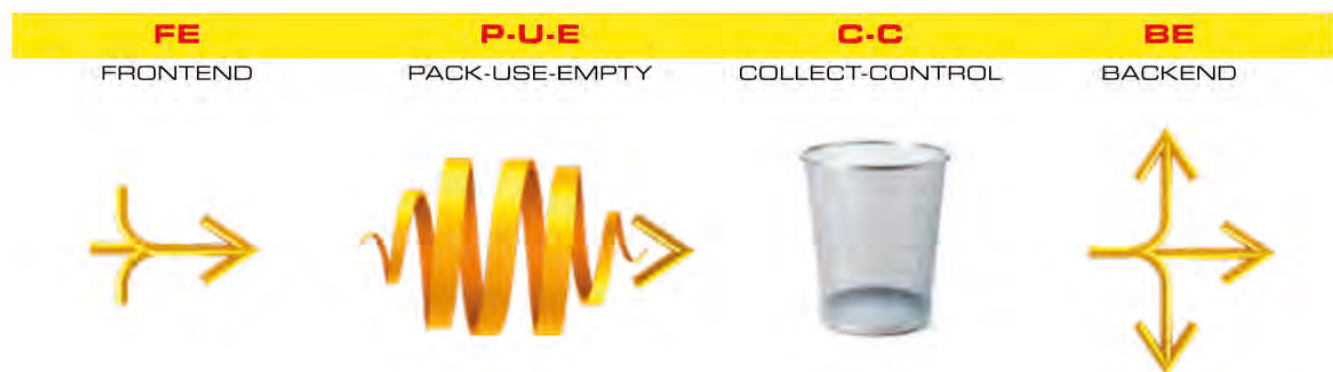


*Holistic innovation is needed as we are all interconnected in packaging*



## 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.



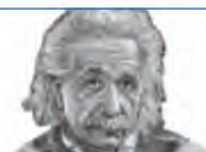
	FE	P-U-E	C-C	BE
Litter			✓	
CO <sub>2</sub>	✓			✓
Inadequate pack optimisation Product Packaging material + Total environmental impact				
Future issues	✓	✓	✓	✓



# 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)**





# StePac's Automated Packaging Formats Reign on the Chile- China Route

**S**tePac Ltd.'s lean, automated Modified Atmosphere Packaging (MAP) solutions gained rave reviews among Chilean cherry packers and exporters especially during the recent China cherry export season ahead of the recent Chinese New Year celebrations. The novel packaging formats have proven instrumental in helping the packers make the transition from manual to faster and more efficient automatized processes to counter the recent labor shortage hurdles.

In response to the boom in Cherry exports from Chile to China and the rest of Asia, Chilean Packers are turning to StePac's novel, lean **Xflow™** proprietary films inbuilt with properties specifically tailored for automated

bulk-packaging and long-term storage and shipment of cherries. Packers proclaim **Xflow** has drastically lowered the dependency on labor and has enhanced food safety by minimizing handling during the packing process. Beyond the boost in operational efficiency, the packaging represents a considerable reduction in plastic packaging and stakeholders are enjoying the benefits of MAP technology namely the extension of product shelf life, reduction in food waste and lowered shipping costs associated with sea freight.

The fresh produce packaging innovators have been working with Chilean distributor Empack to diversify its portfolio of bulk and retail packaging to meet the evolving logistical needs for this high-demand fruit and to preserve

its full freshness, flavor and nutritional value as it makes the lengthy journey from Chile to Chinese consumers which can last 35 days.

The versatile film is especially suited to 2.5kg and 5kg packages and is easily adapted to automatic fillers and packaging lines, allowing for reduced handling and thus significantly less manpower. The lean film also effectively reduces plastic consumption by up to 40%. This product was successfully used by more than a dozen exporters of cherries during the 2021/22 Chilean cherry season.

"The exponential growth in cherry exports, coupled with major labor shortages, created major challenges for Chilean cherry packing houses,



## *StePac's automated modified atmosphere packaging solutions for bulk and retail cherries help relieve labor shortages*

calling for more sophisticated packing operations to accommodate both jump in volume and the short and intensive packing season for cherries," explains Gary Ward, Ph.D., Business Development Manager for StePac.

With more than 44,000 hectares (almost 110,000 acres) of land dedicated to cherry cultivation yielding more than 300K tons in annual cherry exports, Chile is the leading global exporter of cherries and is on a trajectory for further year-to-year growth. More than 95% of cherries grown in Chile are exported to the Far East, mainly China, with the bulk of shipments timed to arrive in time for the Chinese New Year. Cherries are considered an ideal gift for the Chinese New Year, as their red color and round shape represent fortune, prosperity, and eternity in Chinese tradition.


Meanwhile in China, StePac's **Xgo™** resealable top-seal/lidding film has been making waves in the E-commerce and retail sectors since the last Chilean cherry season. "This attractive, functional retail packaging solution was designed to take the value of StePac's MAP technology all the way to the consumer and has been eagerly embraced by our customers in China," enthuses Guillermo Perez, category manager for Empack. "We currently supply 20 Chilean exporters cherry punnets sealed with personalized printed-lidding films that house smaller 500g-2kg cherry volumes for the Chinese retail sector."

Xgo's advanced, lightweight top seal

is infused with StePac's MAP life-extension properties. That preservation activity is regenerated each time the label is resealed, making it ideal for multiple cherry servings. The films can also be easily integrated into automated cherry packing lines and save the need for repacking in China.

"The two novel products have garnered excellent feedback from our Chilean partners. They have reported up to 50% reduction in labor costs associated with sealing, while the customers in China welcomed the boost in customer experience owed to the new lidding film," adds Ward. "We found a strong partner in Empack, who massively invested in flowpack and topseal machinery to propel the smooth transition to automation and to support customers that don't have

their own. Based on these unqualified successes, we are eyeing the northern hemisphere cherry market and expect our products to be adopted widely there in the forthcoming season."

StePac's full line of advanced MAP products will be showcased at the upcoming Fruit Logistica 2022 in Berlin, April 5-7. 

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





# SELF-ADHESIVE LABELS: all from a single source

*Sappi to showcase its new range of high-quality label and silicone base papers at Labelexpo*

## Label Papers



## Silicone Base Papers



**S**appi, a leading manufacturer of packaging and speciality papers, will be introducing its extensive range of facestock papers and silicone base papers as well as wet-glue label papers at the upcoming Labelexpo Europe in Brussels from 26 to 29 April 2022.

Visitors to the Sappi stand in Hall 5, Stand B 13 will have the opportunity to experience the company's new glassine, CCK and label papers.

As an independent paper manufacturer, Sappi offers its customers in the self-adhesive label sector all papers from a single source.

- Enhanced formulation of glassine papers from the Silco product family.
- New Sol CN and Sol LF CCK papers with excellent flatness
- The new semi-gloss Parade Label SG facestock paper
- Parade Label Pro for non-wet-strength wet-glue labels
- High availability and fast delivery of label papers thanks to portfolio expansion at the Gratkorn site

Processors, printers and brand manufacturers can always count on Sappi as a provider of broad-based solutions who can meet their requirements worldwide – in line with the “everything from a single

source” maxim and in consistent premium quality. This also applies to the company's broad portfolio of silicone base and label papers.

With its many innovations and as an independent provider, Sappi offers its customers even more options in the areas of self-adhesive and wet-glue labels.

Michael Bethge, Sales Director Speciality Papers at Sappi Europe confirms: “We are looking forward to enjoying face-to-face discussions and consulting face to face, and to presenting our new products at our Labelexpo exhibition stand.”

### New silicone base papers for greater efficiency

Sappi's Glassine and CCK silicone base papers offer exceptional siliconisation properties as well as easy and efficient processing. They are used as release liners for a variety of self-adhesive applications such as self-adhesive labels, graphic applications, adhesive tapes and office supplies.

To meet the high expectations of its customers, Sappi recently improved the entire glassine paper formulations of its Silco product family. These include the supercalendered Silco Label and Silco Tape BS papers as well as Silco Process Liner BS. These have been successfully produced for decades at Sappi's Condino mill in Italy.

Right on time for the trade fair, Sappi will be introducing two new CCK papers to complement the Sol product family. With Sol CN, Sappi is presenting a one-side double-coated CCK paper designed for office materials such as self-adhesive labels or adhesive tapes. The paper is available in a grammage of 55g/m<sup>2</sup>. It features characteristics such as high strength, a remarkably smooth surface and low silicone consumption, as well as easy, cost-efficient handling and excellent lay-flat properties.

The second CCK launch at Labelexpo is the Sol LF paper with extraordinary flatness. Available in 120 and 135 g/m<sup>2</sup> basis weights, this paper features high strength, low silicone consumption, a smooth surface and cost-efficient processability. Moreover, its excellent lay-flat properties with almost imperceptible dimensional change in the cross direction make it the perfect material for self-adhesive films in the graphic arts sector.

### Outstanding label papers


The new Parade Label SG facstock paper boasts first-class printing

and finishing properties. Launched in autumn 2021, this one-side coated, semi-gloss paper for self-adhesive label applications excels with its outstanding printability, opacity and stiffness, as well as its excellent further processing capabilities. It is ideally suited as a self-adhesive label for general packaging, transport packaging, disposable bottles and containers.

Parade Label Pro, launched in mid-2021, has been very well received in the market. The glossy, one-side double-coated wet-glue label paper features an exceptionally smooth surface as well as a high degree of whiteness, while ensuring excellent printing and finishing results. Visitors to Labelexpo will experience the paper – designed for challenging labels in the food, beverage and consumer goods sectors – as the perfect choice to achieve distinctive visual impact and product differentiation in retail environments. Selected references from around the world will be presented to visitors at the stand.

### Targeted focus on availability and fast delivery

To ensure 100% availability and fast delivery of its label papers, Sappi has secured reliable production and seamless supply chains. Whereas label papers in Europe were previously only produced in Alfeld, Germany, in Carmignano, Italy, and in the USA at the Somerset site, Sappi now offers an ideal addition with its plant in Gratkorn, Austria. The state-of-the-art production facilities, covering everything from paper machines to sizing equipment, and many years of ex-

pertise in the production of coated papers are the best prerequisites to ensure first-class products. Shorter production cycles enable Sappi to always guarantee high availability and fast delivery of its premium label papers. 

### About Sappi

Sappi is a leading global provider of sustainable woodfibre products and solutions, in the fields of dissolving pulp, printing papers, packaging and speciality papers, casting and release papers, biomaterials and bio-energy. As a company that relies on renewable natural resources, sustainability is at our core. Sappi European mills hold chain of custody certifications under the Forest Stewardship Council™ (FSC™ C015022) and/or the Programme for the Endorsement of Forest Certification™ (PEFC/07-32-76) systems. Our papers are produced in mills accredited with ISO 9001, ISO 14001, ISO 50 001 and OHSAS 18001 certification. We have EMAS registration at 5 of our 10 mills in Europe.

Sappi Europe is a division of Sappi Limited (JSE), headquartered in Johannesburg, South Africa, with 12,500 employees and 19 production facilities on three continents in nine countries, 37 sales offices globally, and customers in over 150 countries around the world. Learn more about Sappi at [www.sappi.com](http://www.sappi.com)

# sappi



# Archroma launches new PFC-free\* and ammonia-free\* Cartaseal® VWAF barrier for odorless paper-based food packaging

**A**rchroma, a global leader in specialty chemicals towards sustainable solutions, today announced the launch of Cartaseal® VWAF, a new industry-leading perfluorinated compound (PFC)-free\* and ammonia-free\* barrier coating for odor-free packaging applications.

Archroma is well known for its innovations and sustainable solution systems aimed at helping packaging & paper manufacturers to optimize productivity

and/or create value in their markets. The multifunctional Cartaseal® range offers barrier solutions that can be used to protect from grease, oils, water and water vapor in both packaging and food packaging applications such as pizza boxes, sandwich wedges, fresh vegetables, fast food service and general supermarket packaging.

The latest addition to the range is the new Cartaseal® VWAF, which has been developed in line with the

principles of "The Archroma Way to a sustainable world: safe, efficient, enhanced, it's our nature".

The innovative Cartaseal® VWAF is designed to form a continuous and defect-free film-like coating on the paper surface. The resulting barrier offers class-leading performance against the penetration of oils, fats, water and vapor.

The odor-free product is also ideally suited to food packaging applica-





tions, where the taste and smell of the packed food can be very sensitive to the environment and must be carefully preserved for the full enjoyment of the consumer.

Thanks to its superior performance, Cartaseal® VVAF can be used as a more sustainable alternative to replace not only PFC-based coatings but also plastic in applications where resistance to water, oil and fats and water vapor condensation is required.


Developed with food packaging in mind, Cartaseal® VVAF is compliant with FDA and BfR requirements for food contact applications. It is also compliant with, eco-labels such as EU Flower, Nordic Swan and several annexes of Blue Angel, and is of course REACH registered.

Importantly, Cartaseal® VVAF offers increased potential for compostability, repulpability and recycling compared to PFC and plastics, since the coating will break down with the paper during the recycling process.

Cartaseal® VVAF is at the core of the new PACK IT CLEAN system just launched by Archroma where it is combined with a primer solution for cases where a binder or pre-coat can also be used to further boost performance. The PACK IT CLEAN system can be found in the online Archroma System Selector: <https://www.archroma.com/systems>.

"Consumers and regulators are increasingly attentive to how products are made, and rightfully so", explains

Andy Bell, Head of the Competence Center Chemicals at Archroma. "It is our responsibility as an industry to develop and convert to technologies that reduce our impact on the environment and on people's health. That is exactly what we at Archroma do, with innovations like Cartaseal® VVAF. Because it's our nature."

All systems can be found in the online Archroma System Selector. 

**[www.archroma.com/systems](https://www.archroma.com/systems)**



\*Below the limit of detection according to industry standard test methods

® Trademark of Archroma registered in many countries.

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# CIRCULAR ECONOMY: industry and environment in co-existence

## *"Pastazzo" promotion for an eco-friendly business*

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

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

The study we have been carrying out for some time is allowing us to re-engineer its enhancement. The combination of technologies and ancient traditions permit to reuse these production wastes as new raw material.

The analysis opens new business opportunities for the protagonists of the supply chain, focusing on reducing industrial production costs and at the same time allowing the surrounding environment to be preserved.

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

Depending on the type of citrus fruit and processing, the production of fresh "pastazzo" varies from 49% to 69% by weight of the fruit subject

to the transformation process. Sometimes the "pastazzo" also contains process water absorbed during the production phases.

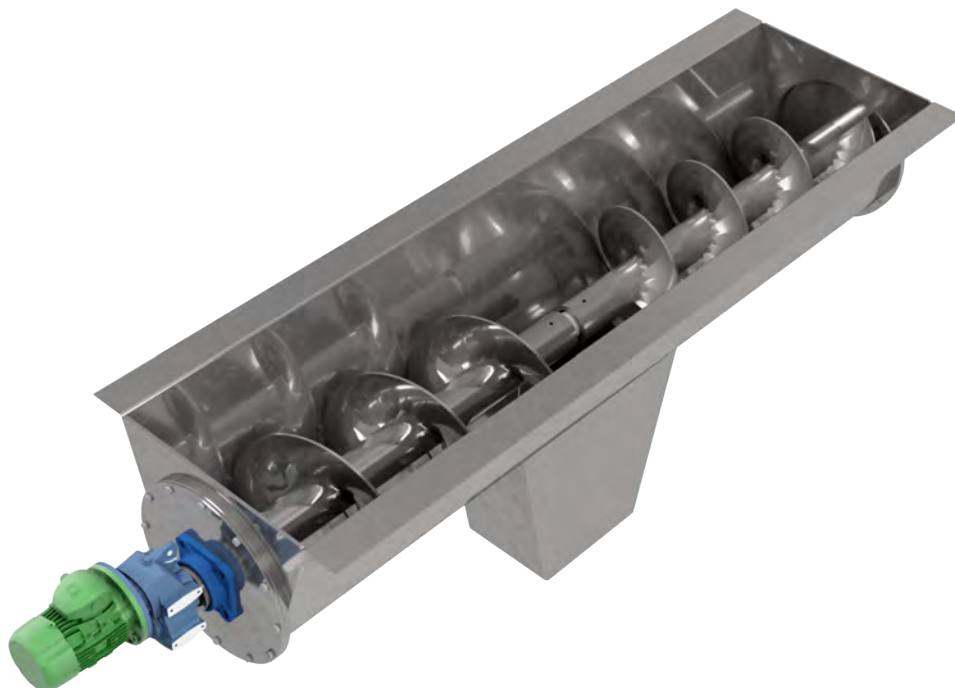
As a pure indication, we can highlight the different processing products and by-products from the transformation of 10 tons of citrus fruits from which to obtain:

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

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

- **5000 [kg] of fresh zest "Pastazzo"**

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



The citrus fruit pulp, as known, is a by-product of the food processing industry consisting of lemons and oranges waste subjected to the extraction of juice and essential oils. From a chemical-physical point of view, **the "pastazzo" is made up of residues of peels (60 ÷ 75%), pulp (30 ÷ 35%) and seeds (on average 0 ÷ 9% depending on the quality of oranges and lemons undergoing transformation).**

Our mission as **ORION ENGINEERING S.R.L.** company is to make the reuse of this resource usable, through our technology under development, to give the opportunity not only to large industrial processing plants but to many others. The synergy of our growers and all the players involved in this supply chain is one of the keys of success of the process.

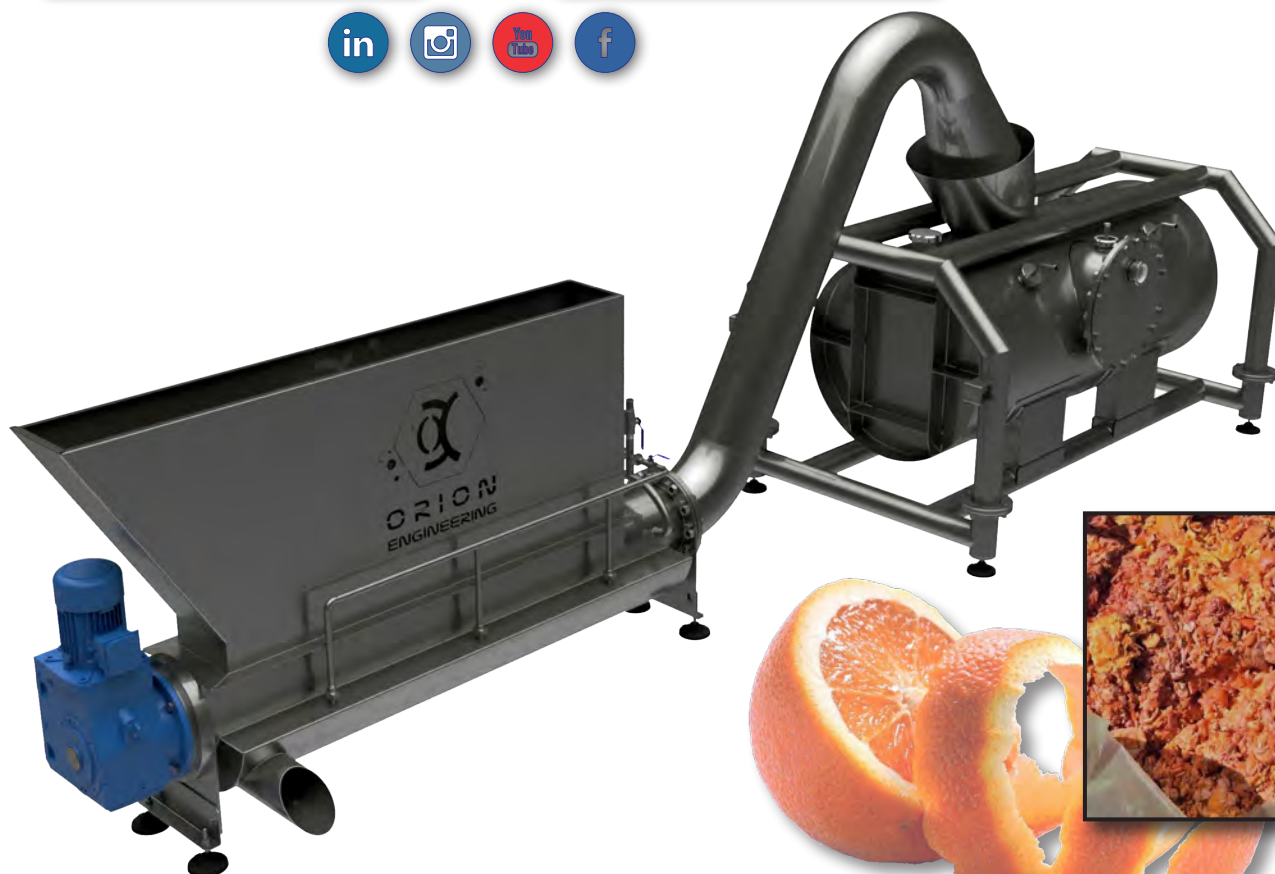


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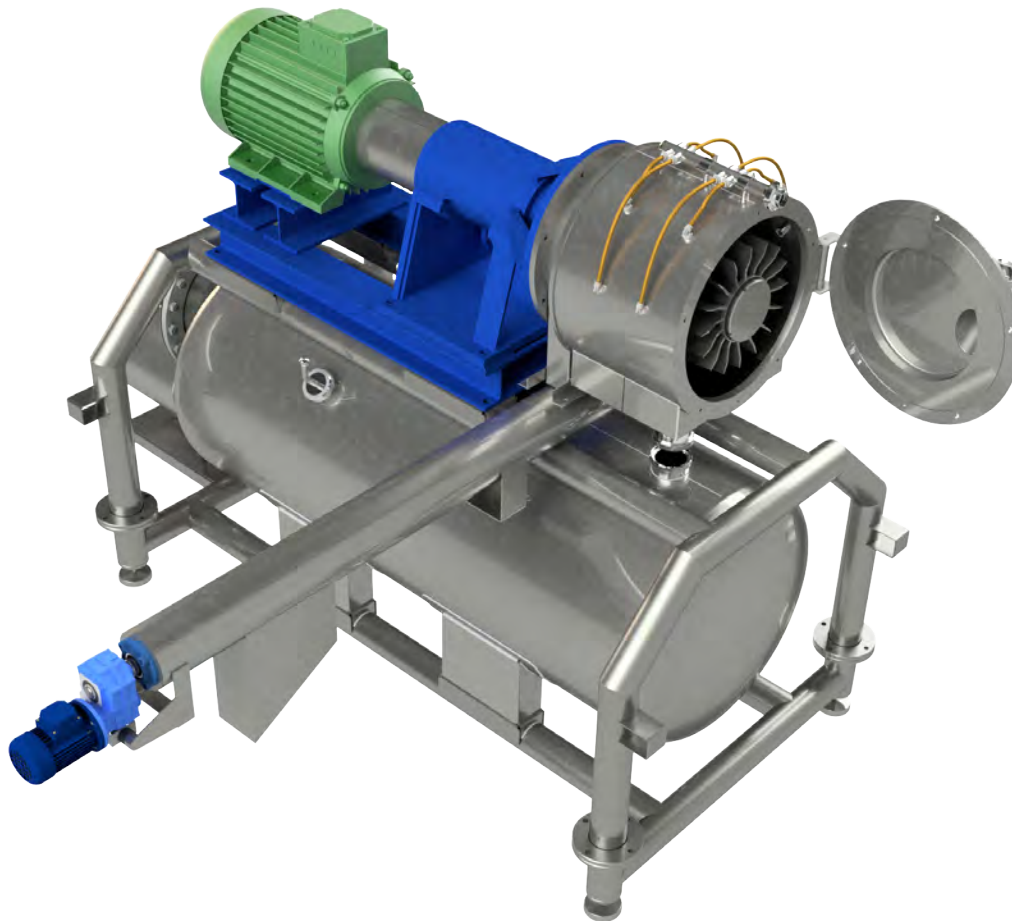
Via La Bionda, 6 (Quartiere Industriale La Bionda)  
43036 Fidenza (PR) Italy | Phone: +39 370 371 1521

E-mail [info@orion-eng.it](mailto:info@orion-eng.it) | [www.orion-eng.it](http://www.orion-eng.it)

**"Tailor-made" Solutions**

*By integrating sustainability and compliance with EHEDG standards into each solution.*





• **9330 [l] di Liquid residues**

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

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

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

The synergy of our growers and all the players involved in this supply chain is one of the keys of success of the process.

Our country, with the notification to the European Commission of 13 February 2019, highlights the need for and importance of the use of this resource, asking for the regulation for production, marketing and use of "pastazzo" as a by-product of citrus processing for its agricultural and zootechnical use.

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

From the grinding and drying of the fiber, some flour is obtained that has the characteristics of dietary fiber and great water absorption power, for a "sponge effect" that would allow this

flour to at least partially replace the dietary fats present in snacks and other bakery products.

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

[www.orion-eng.it](http://www.orion-eng.it)





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# 2022 KOREA PACK

Korea Int'l Process & Packaging Exhibition



ONLINE OFFLINE *Hybrid Exhibition*

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**KINTEX 1, KOREA**

► ONLINE

**[online.pack-icpi.com](http://online.pack-icpi.com)**

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# Pressed stock cubes: IN-LINE EFFICIENCY

*A brief interview with the IMA team behind the highest speed line with the smallest footprint available on the market*

**T**he manufacturing of pressed stock cubes is a market niche where a higher level of efficiency is often required: all the machines in the line have to work together in synergy to ensure maximum productivity. Today IMA is the

only supplier on the market that can single-handedly offer a complete line. We had a brief conversation with IMA experts regarding the latest development in this field: a complete line with an output of 2,000 tablets/minute.

**Let's start with Fabriano Ferri-  
ni, Product Manager for Tablet  
Presses at IMA Active. Since  
we are talking about pressed  
stock cubes, I suppose  
everything starts with a tablet  
press. Is that right?**

Yes, that's right: the first machine in the line is a tablet press. Prexima is designed to guarantee high efficiency in production, mainly pursuing two factors: high output and consistent processing.

Prexima features several technical solutions for high-speed tableting of bouillon powder.

A new die feeder has been designed specifically for high efficiency feeding of wet masses with low flowability. This has proven to ensure low deviation in weight, even with tablets of 10 grams or more.

Compaction and dwell time are also important factors when high speed needs to be reached.

They allow more time for the ejection of the air contained in the powder blend and for the bonds to be made between the particles.

Here, the 250 mm pre and main compression rollers mounted on Prexima really make all the difference, as well as the IMA 32T tooling, which features a larger punch head.

In addition, the Prexima high-yield motorisation minimises heat production in the lower compartment, being the



ideal solution for low melting or heat sensitive products. Low temperature tableting maintains blend flowability at die feeding, prevents product sticking to punches, and dies and preserves tablet quality.



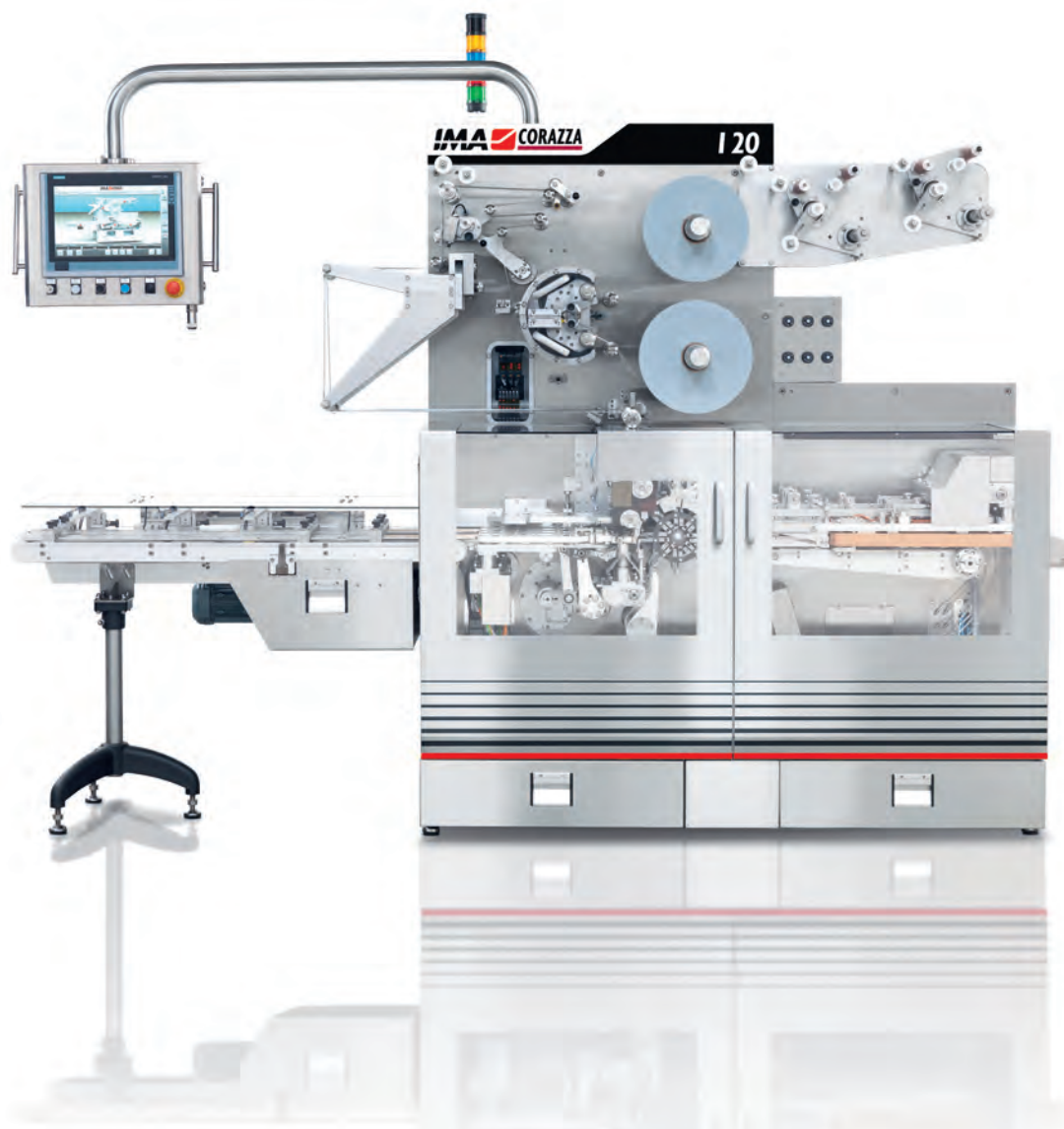
**So, Prexima can run fast. But to achieve efficiency you must ensure a consistent process as well.**

Correct: an optimal OEE is based on a robust operation, which minimises unexpected line stop, reduces cleaning times and maintenance work. From this perspective, Prexima ensures complete separation between processing and mechanical areas thanks to the use of purposely designed seals and protections. The absence of products in the mechanical area makes

for extended duration of cams, tooling and compression rollers, leading to reduced cleaning time. In addition, a powder-free mechanical area allows for a totally automated and recirculated lubrication system: the control system automatically takes care of lubrication frequency, without any need for operator intervention. In that way, the best parameters do not depend on the operator's skills. The only required action is to check the oil level and refill it, if necessary.

**Now the tablets have to be wrapped. Let's turn to Davide Giordano, Sales Manager at IMA Corazza.**

That is correct. Stock cubes are wrapped by the I20 wrapping machine, in side-folding execution, with its fully electronic operations. The machine can be equipped with the "easy-opening unit" which enables an easier consumer-oriented opening of the stock cube wrap. The I20 is also able to handle paper-based packaging





materials, which is certainly a plus for Corazza solutions in a world where recyclability and sustainability have become a must.

### What are the I20's main hallmarks?

The I20 has been engineered with a very compact footprint, delivering a space-saving solution. What's more, its modular design means it is easy to access and maintain.

Its two-lane execution, equipped with a unique wrapping reel without any aligning unit, ensures gentle operations and high efficiency. The dedi-

cated feeding system allows for a compact design to be delivered for both the press and the wrapper: products coming out of the pressing unit accumulate on the two-lane conveyor, distanced thanks to the acceleration wheels and then driven towards the folding wheel by a pusher.

The new welding system, installed in the outfeed grouping unit, ensures excellent sealing quality of the final product. Compared to other wrapping equipment available on the market today, the I20 machine concept and operations allow for very fragile products to be handled.

### What about maintenance and cleaning?

Since the I20 has been developed to meet customer expectations in terms of maintenance, the plug-in design of the main groups greatly facilitates activities such as reel change, foil feeding set-up as well as infeed and outfeed group cleaning.

The I20 shows its customer-oriented approach through the HMI control panel, which reports machine performances to monitor production, has alarms to tackle downtimes and enables remote machine assistance.



**The high number of tablets released by the I20 means an automated solution is necessary to place them into a tray. Let's listen to Michele Nomi, Area Sales Manager at IMA GIMA, who can give us some more details on the FTB569 tray packer.**

Over the last few years we have seen increasingly faster wrapping machines and, at the same time, a general growth in labour costs.

These factors have led many customers to look for automatised solutions also in the end-of-line sector, replacing what was normally done by semi-automatic equipment or even manually by operators.

It has been almost ten years since we began collaborating with IMA Corazza, supplying a downstream wrap-around tray packer for wrapping machines, and I can definitely say it is highly appreciated on the market for its many features.

First, its compactness – a total length of approximately 2 metres, including infeed and outfeed conveyors – and its accessibility.

Then, product handling and flexibility: thanks to the servo driven movements and other tailored devices, we can guarantee the smoothest product handling without any damage. Lastly, the machine is designed to provide a quick size change, switching from one format to another by replacing just a few parts, allowing our customers to be reactive to market changes and trends, while maintaining high efficiency levels.

**You mentioned the wrap-around tray packer. What are the advantages of this technology?**

The fully automatic technologies used to place the tablet in trays are usually top loader and wrap-around. Although

we have both of them in our portfolio, for this specific application we have decided to use the wrap-around solution because of several advantages.

Firstly, as we have just mentioned, the compactness of the machine.

Secondly, optimised tray dimensions: by forming the tray directly around the bundle, we can design it with zero tolerance between product and tray, which means a reduction in the used material, while achieving significant annual savings in logistic and shipping costs.

Last but not least, the quality: a tray that perfectly fits around the product looks better on the shelf and facilitates its wrapping.

**Now we should wrap the tray... Let's ask Enrico Pazzi, Food Sales Manager at IMA BFB, which has a long tradition of designing and manufacturing end-of-line machines, ranging from overwrapping and stretch wrapping to case packing, palletizing and handling solutions. If you had to choose the best machine to end this line, which one would you propose?**

The A50: it is a very compact machine. Its reduced footprint also makes it the ideal end-of-line solution when it comes to wrapping because it can easily adapt to any space constraint. Being the final equipment in the line means that it has to be flexible in size if you want it to fit into any space.

The machine is also extremely easy to operate. Operators do not have to be trained or particularly skilled to use it. We can say that it is designed with the operator in mind because it is easily accessible thanks to its balcony structure: it is very easy to reach the product-flow areas for cleaning.

The A50 guarantees maximum protection both for the operator and the product.

**How is overwrapping carried out on the machine? How is the final quality of the wrap guaranteed?**

The machine has specific film unwinding, cutting and sealing systems to ensure that the film is always cut with a very precise fold and sealed without wrinkles, air bubbles or other imperfections. The product is treated with care, lifted by the elevator, gently wrapped and pushed to the sealing area, where it is securely sealed and closed as it goes through the sealing plates. Thanks to this system, the machine can handle very thin films, like 16 micron films, considering the standard thickness is 22-24 micron. The option of handling thinner films brings significant advantages because, on the one hand, you can reduce the cost of the packaging material and on the other, you have a greater film reel autonomy which means less operator intervention. 🏢

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

### **Make the most – The IMA Virtual event dedicated to Confectionery and Snack market**

The Sensing Future Days cycle continues: a new virtual event completely dedicated to the processing & packaging solutions for the Confectionery market will take place on May 27th, the agenda will be available in the next days. Join the Sensing Future Days community to receive updates on the agenda. March edition: the last virtual event entirely dedicated to complete lines for stock cubes, processed cheese, butter & margarine, yoghurt, beverages & baby food and of process technologies for gums, candies & coated sweets is now available on-demand on the IMA Sensing Future Days Platform. Sign-up now at [sensingfuture.ima.it](http://sensingfuture.ima.it) to re-watch these sessions, as well as any other session from past editions.



# INNOVATIVE AUTOMATIC DOSING SYSTEM: fast, accurate and eco friendly

*Color Service is an Italian excellence and since 1987 has positioned itself as a leading supplier of automatic dosing systems for any kind of powder and liquid product.*

**W**ith a start in the textile field and thanks to years of experience and know-how, Color Service introduced its unique technology into many markets segments (rubber, tire, cosmetics, plastics) before orienting his innovation into the food industry, where the dosing of powders and liquids requires considerable precision, speed and traceability.

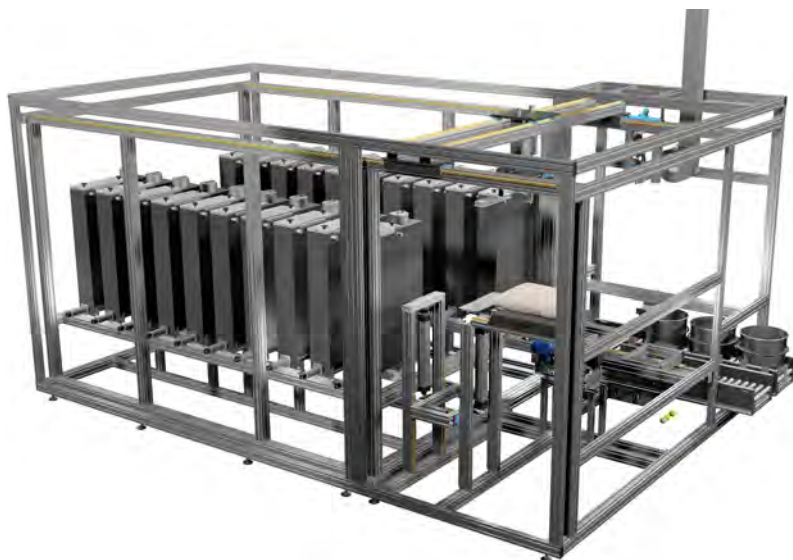
## **Why dosing is so important in food processing?**

Weighing is a key element of the food production process for quality compliance: dosing the proper amount of ingredients is extremely important to fulfill recipe specifications and constant quality requirements. In most cases, the food industry's

weighing department employs operators who manually dose raw ingredients, resulting in difficult and complicated management in terms of weighing accuracy.

To support this necessity, our technology is designed to solve problems associated with the manual weighing of any kind of powders and liquids applied in the food industry and it is developed with the goal of achieving a safe, fast and precise dosing. The aim is therefore the development of high-efficiency systems that allow to minimize the production costs and boost productivity while also improving final product quality, essential for the competition of all companies.

According to customer's requirements, Color Service offers to the market two





solutions of automation: a complete full automatic and a semi automatic weighing system.

### **Full automatic dosing system**

With the full automatic dosing system, all processes are automatically monitored and data are recorded in the software integrated with the customer's management system. The activity of the operator is exclusively confined in the loading of products into storage silos of various capacities through high-performance vacu-

um for powders and pump for liquids that guarantee fast loading with low air consumption.

During the dosing, a multi-scale conveyor completely aspirated through a dedicated dust extraction system allows high dosing accuracy of recipes that can be dosed directly into a bucket or in identified bags created in a completely automatic way: this is a fundamental characteristic that allows each individual recipe to be traced. The full automatic system, guarantees High Dosing Accuracy,

Batch Traceability and Modularity of storage stations and according to product consumption and production requirements, the system offers several storage modules of different capacities that could be interchangeable or expanded in the future.

### **Semi-automatic dosing system**

On the other hand, the semi-automatic weighing system can offer a good compromise: the robotic storage of powder products with the manual







weighing assisted by a PC. In this way, according to the recipe, the system drops the right box and transfer it to the weighing position, where the operator, guided by the PC can dose the product.

## Key benefits of our automatic dispensing system

By investing in an automatic dosing system, the customer will be able to benefit from a repeatable production process that runs 24 hours a day, is reliable and fast, in which human error is definitively eliminated and which allows leading to high-quality

end products with uniformity features throughout time.

Systems are user-friendly and software is intuitive and easy to use, allowing a quick and easy understanding.

„Dosing right the first time” as a consequence of accurate and exact dosing of powders and liquids, results in a reduction of product waste, energy/water consumption, processing times and, as a consequence, cost.

From the ecological point of view, our technology reduces to zero the exposure for operators to dangerous substances or toxic ingredients and provides absolute control of the dust

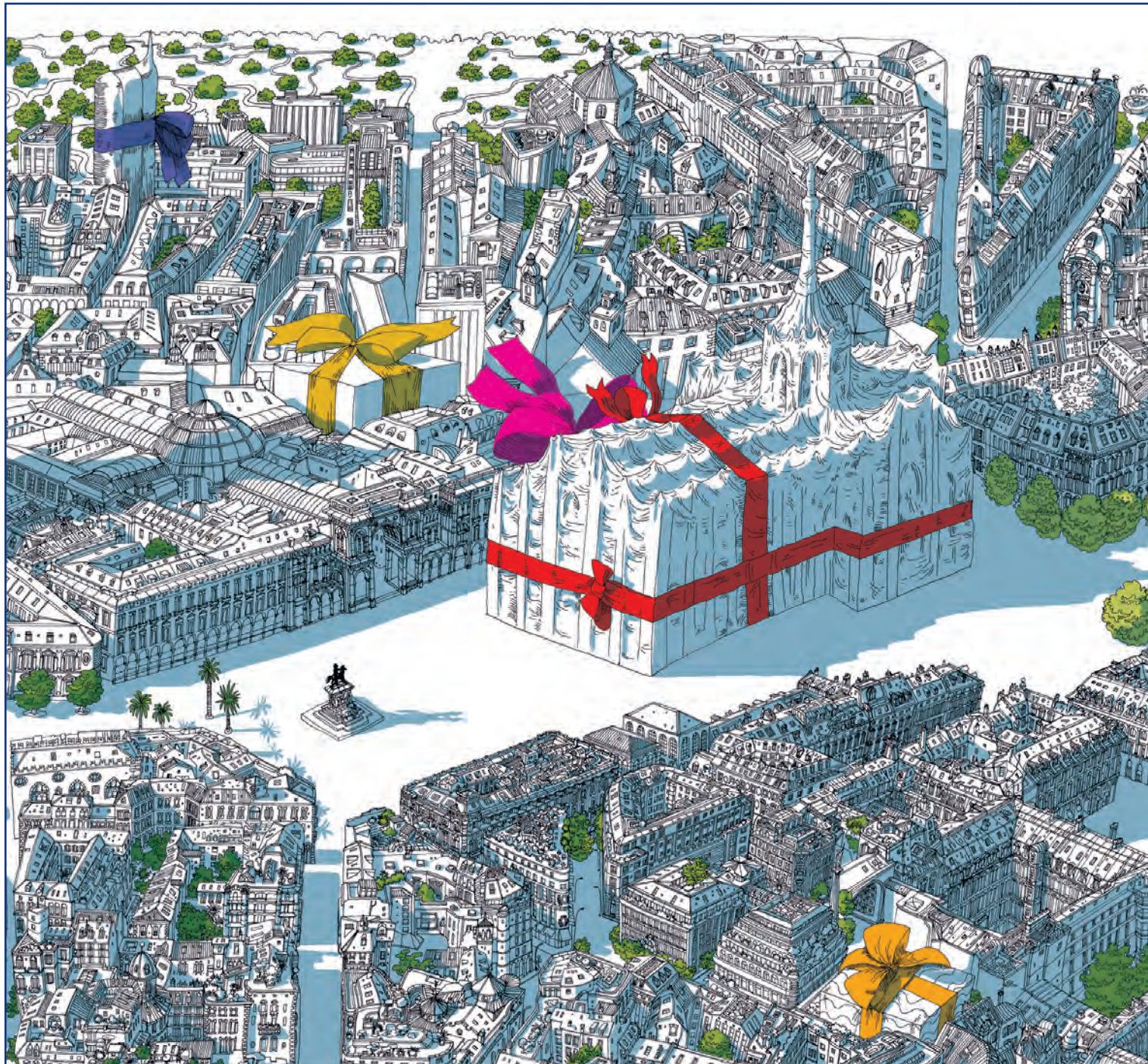
emitted during the weighing with the use of special suction devices, ensuring total operator safety and environmental protection.

Another significant advantage is the traceability of recipes. Indeed with a manual weighing, in case of non-conformity, it is impossible to identify all the products that are affected by this problem downstream and it is difficult to trace the causes upstream that can be represented for example by an incorrect mixing proportion or from a non-conformity of a specific ingredient. Without expensive labor costs due to manual batch processing and profit loss due to recipe formulation mistakes, companies can begin to boost profits, while offering a superior and uniform product to their customers. 🏠

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# THE HIGHEST SORTING EFFICIENCY ON UNWASHED POTATOES: discover Raynbow by Raytec Vision



One of the most meaningful steps forward is the high efficiency in the sorting of **unwashed potatoes** with **Raynbow** optical sorter. Raynbow was launched for the first time in the market in 2001 when Raytec was established, and it soon proved to be very effective for the tomato industry.

The technology of Raynbow has been so successful in tomato farms, that nowadays the largest tomato producers are using a Raynbow machine for tomato sorting. Rapidly, this machine was also applied to tubers like potatoes, onions, carrots, and fruits like

apples, cherries, olives, and plums. It is an optical sorting machine with high-resolution sensors that examine the product using the "high-speed double vision" system which analyses 100% of the surface of each product, and it is therefore particularly adapted for "rolling" products.

In 2021, the growing partnership with some of the largest potato producers allowed Raytec to perfect the application on unwashed potatoes, improving the machine's performance. Raynbow is able to discard **stones, soil clods, and green potatoes while being able**

**to identify potatoes covered with soil.** "The success on unwashed potatoes has been so great - explains Gianluca Simonelli - that our client Felbermaier has become our brand ambassador, opening up important opportunities in the largest potato-producing countries". Hans Felbermaier, the owner of a family-run company based in Bayern, enthusiastically participated in a video listing all the benefits of installing Raynbow for his production.

Not only accuracy but money-saving (due to the reduced number of manual sorting personnel), and well-structured

*“Raytec Vision, an Italian company specialized in optical sorters, has closed positively 2021” says Gianluca Simonelli, sales director, who proudly talks about the latest important innovations in technology applied to food safety and quality.*

customer care. “The installation took only one day - says Felbermaier - and thanks to the remote connection, it is always easy to contact technicians and solve problems”. Each sorting machine has its own user-friendly interface to monitor the machine’s performances and analyze waste in real-time.

Raytec introduced also the Rainbow R-270 at the 2021 edition of Interpomm in Belgium. This sorter is designed to fit high capacities (up

to 55 t/h), and the 3WAY configuration drastically reduces waste by optimizing production and differentiating between A and B-series waste that can be collected and repurposed for other uses (such as becoming part

of animal feed). By autumn 2022, a 2.4-meter wide version will also be available to serve customers who need large hourly capacities. 🏢

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





# Solve Fermentation Challenges Through APPROPRIATE VALVE SELECTION

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

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

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

The secret to meeting customer expectation every time lies in your fermentation process.

To ensure quality, consistency and taste across various beverage styles and flavors, the fermentation process requires exact temperature control. To precisely control heating and/or cooling parameters, control tanks must be equipped with the right valve system.

Too often, valves experience short service lives and other performance issues that can cause temperature fluctuations — compromising beverage quality and costing precious time and money.



The fermentation process in the beverage industry requires precise temperature control

## Common Obstacles Make Tank System Upgrades Difficult

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

Depending on your system, it's also important to select valves that are rated to handle the appropriate me-

dium. In propylene glycol systems, for example, this nontoxic liquid medium flows through thermal jackets surrounding the fermentation tanks. In a

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

Because fermentation is such a vital process, it's no surprise beverage makers look for opportunities to install or upgrade their tank cooling and heating systems.

But these modifications aren't without their challenges. Many facilities, particularly smaller operations, have limited physical space.

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

Other challenges include:

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





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

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

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

### How To Select Valves That Overcome Fermentation Challenges

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

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

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

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



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



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

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

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

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

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

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

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

These valves are the preferred alternative to diaphragm and ball valves. They allow tight shutoff in both directions and contain no bleed holes, eliminating the chance of glycol plugging and the possibility of related tank temperature fluctuations.

They are also one-third the cost of ball

valves and last up to 10 times longer. Many angle seat body valves are designed to handle back pressure, eliminating the need for check valves, and feature a rugged, stainless steel body that resists sulphur vapor in processes like winemaking.

### **Automation Further Improves Temperature Control**

In addition to proper valve selection, it's important to consider automating your fermentation heating and cooling systems to achieve even greater thermal precision.

For example, the G3 Electronic Fieldbus Platform makes this process quick, simple and painless. G3 integrates communication interfaces and input/output (I/O) capabilities into your pneumatic valve manifolds, which enables your PLC to more efficiently turn valves on and off, as well as channel temperature data from resistance temperature detector (RTD) sensors. Compact and modular, G3 includes

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

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

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

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



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



# SYNTEGON LAUNCHES new pick-and-place platform

- *New robotic pick-and-place platform for product handling, feeding and loading*
- *Strong combination of industrial expertise, control and robotics technology*
- *Syntegon RPP: modular, individually configurable and scalable*

**T**he Covid-19 pandemic has further fueled the automation megatrend. Manufacturers of different products, especially food, increasingly rely on robotic solutions to automate critical process steps or to fully automate entire systems. Syntegon Technology has been offering robotic solutions for process and packaging technology for many years. With its newly developed robotic pick-and-place platform, Syntegon RPP, the company sets a new standard in the automation of packaging lines. "We are more than ready for the requirements for the factory of the future. Automation and robotics are important strategic focus areas for Syntegon," says Dr. Silke Blumer, Vice President Strategy and Product Management for the business unit Food at Syntegon.

The core functions of the newly developed RPP platform include quality assurance, user-friendliness and efficient production processes. "Thanks to our proven expertise in robotics combined with industrial know-how, we can offer our customers automated turnkey solutions from a single source," Blumer confirms. "We understand the food industry's requirements for machines and lines better than any other manufacturer – from

process technology to primary, secondary and transport packaging."

## **Maximum flexibility thanks to individual configuration**

The Syntegon RPP platform automates process steps such as handling, feeding and loading. The new robotics platform is designed as a modular system. This allows individual configuration of the robotic cells. "Each customer project is different. Thanks to the modular RPP platform, we can

handle a wide variety of products. The Delta robots can be flexibly connected and, together with transport modules, seamlessly integrated into an overall system," explains Andreas Schildknecht, Product Manager Robotics at Syntegon. "Together with our customers, we can automate single process steps consecutively and in line with their needs or budgets, following the principle 'build as you grow'. Moreover, the platform can be scaled to suit different production



Each robotic cell of the RPP platform can be configured individually to automate processes such as feeding, handling and loading.



The new robotics platform is designed as a modular system and can be incorporated seamlessly into existing production lines.

capacities, while multiple cells can be connected."

The open control software ensures the seamless integration of the Delta robots into the line. "The comprehensive integration of controls and hardware is essential for all components within the line to communicate with each other through a single control platform – and to function perfectly together," says Schildknecht. The platform, which was designed according to the latest UX aspects, ensures user-friendly operation. New features support the operators in making their daily work with the line easy and effective. The RPP cells provide excellent visibility, easy access and efficient cleaning. The stainless steel robotic cells meet the IP65 protection class. This minimizes the risk of

contamination for both current and future hygiene requirements in the food industry. Last but not least, the tool-free format changeover reduces downtime, allowing manufacturers to process different products on the same line and to respond quickly to changing market demands.

### Automation is the future

"The growing need for more flexibility and efficiency will be increasingly realized by integrated robotics solutions. Automation is the future," Blumer is convinced. "With the Syntegon RPP platform, we are paving the way for future manufacturing. However, we have by no means reached the end of the road. Our unique combination of mechanical engineering, robotics and industry expertise makes

the Syntegon RPP platform one step of many, albeit a very important one." In parallel, Syntegon will continue to develop further innovative automation technologies – and will soon introduce new developments to the market

Syntegon Technology is a leading global process and packaging technology provider. Formerly the packaging division of the Bosch Group, the company, headquartered in Waiblingen (Germany), has been offering complete solutions for the pharmaceutical and food industries for over 50 years. About 6,000 employees at 30 locations in more than 15 countries generated a total revenue of 1.3 billion euros in 2020. The portfolio of intelligent and sustainable technologies includes stand-alone machines, as well as complete systems and services. Fields of application in the pharmaceutical industry are the production, processing, filling, inspection and packaging of liquid and solid pharmaceuticals (e.g. syringes and capsules). In the food industry, the portfolio includes process technology for confectionery as well as packaging solutions for dry foods (e.g. bars, bakery products and coffee), frozen foods and dairy products.



Andreas Schildknecht, Product Manager Robotics at Syntegon

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



# Planning and realization of machineries for OENOLOGICAL SECTOR

**O**ur company was founded on 09 January 1996 by the current Administrator P.I. Giacomo Cocci who, thanks to the experience gained since 1979 in the wine sector, decided to set up his own business. Over the years the company has grown due to the experience and innate inventiveness of the founder, as well as the arrival into the company of the children and high qualified staff who have added value and new ideas.

## WHAT WE DO

Our business is focused on the study and development of new technologies, on the design of machinery and processing lines, on the construction and marketing of oenology systems. Over the years, oil and beer production plant have been built. In addition to mechanical construction, we are also able to develop com-





A close-up photograph of a woman with long, wavy brown hair, wearing a dark blue dress with silver studs. She is holding a large glass of red wine and smelling it. The background is a soft, out-of-focus white.

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plete turnkey wine cellar projects, taking care of the architectural and technological parts and proposing innovative systems, making use of various patents.

## MISSION

A whole life dedicated to wine and his men. The lucky to have fun with your work. The opportunity to meet and work with great Oenologists and Wine Producers. Our mission has always been: to listen, to understand problems, to propose solutions. We are pioneers, we have always explored innovative and highly topical techniques. We are leaders in ion exchange, in the recovery of fermentation gases, in the design and construction of innovative machines from grape harvesting to bottling, in the construction of complete wine cellars.

## OUR PRODUCTS

- Reception and processing of grapes: Destemmers, sorting lines, receiving tanks, stalk shredder, stalk aspirators.
- Pumps:

- Elliptical rotor pumps, single screw rotor pumps, lobe pumps, peristaltic pumps, piston pumps, floating stator pumps, coaxial pumps.
- Pressing: Membrane presses for soft pressing.
- Musts cleaning: Dynamic flotation units for the clarification of the musts.
- Filtration: Rotary vacuum filters, kieselguhr filters, plate filters, cross-flow filters, microfiltration housing, reverse osmosis.

- Refrigeration: Chillers, heat exchangers, refrigeration plates, electrical panels for to control fermentation temperatures.
- Tartaric stabilization: Manual and automatic ion exchange deionizers.
- CO2 recovery: Plants for the recovery and reuse of fermentation carbon dioxide.
- Sparkling wine and fizzy wine: Complete plants for Classic and Charmat Method.
- Nitrogen: Nitrogen generators and plants.
- Batonnage: Automatic devices for mixing liquids inside the tanks.
- Tanks and accessories: Stainless steel tanks and autoclaves of all types. Removable stirrers.
- Bottling: Bottling systems of all types, manual and automatic. Rinsers, fillers, corks, labellers, capping machines.
- Barriques and tonneaux accessories: Supports for barriques and tonneaux, manual stirrers, filling, emptying, washing.
- Sanitization: Steam generators, dry nebulizers.
- Oxygen dosage: Micro oxygenators.

## OUR MARKET

Our main activity is in Italy but since 1996 we export our products to over 53 countries around the world. Exports currently constitute about a 35% of sales. 🏠

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







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# The TOP QUALITY Industrial Mixers

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

## BAKERY Equipment

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

## PASTRY Equipment

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

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



# ESCHER

mixers





# MERGER SYSTEMS IN PACKAGING LINES: a short guide for selection



**T**he presence of merger systems in the packaging lines is a significant sign of a very high level of complexity and automation. The selection of the correct device is not trivial and has a strong impact on the quality of the products and the proper functioning of the downstream machines and in general on the efficiency of the line.

There are many types of mergers, but the main ones fall into two categories: **pneumatic or accumulation unifiers and dynamic unifiers.**

Accumulation types have “gates” on the entrance lanes which remain closed waiting for the convergence section to be free, then releasing the rows of products in sequence. This simple and cost-effective solution have **two important prerequisites:** the products must be able to withstand the pressure during the accumulation phase and the downstream machines must be able to receive the products in trains without being stressed. The first point is intuitive because it concerns the integrity of the products and it means that those eligible are boxes,

trays, stacked products in tight wraps. It is more important to deepen the second point though. At the exit of the merger, the products are attached to each other or in any case very close, but the speed of the belt is equal to that which would be obtained with regularly timed products with a gap between them equal to the size of the product itself. The average productivity of the line does not change, but when the train arrives downstream, the instantaneous one, from the point of view of the machine, is double. For this reason, either the machine is able





## CONVEYORS

MH is an Italian Company with 30 years of experience in engineering and building conveyor lines for food packaging. It's product portfolio goes from conveyors for machine connection, elevators, mergers and whatever accessory may be needed to realize a turnkey plant.



MODUL-FLEX

## BUFFERING SYSTEMS

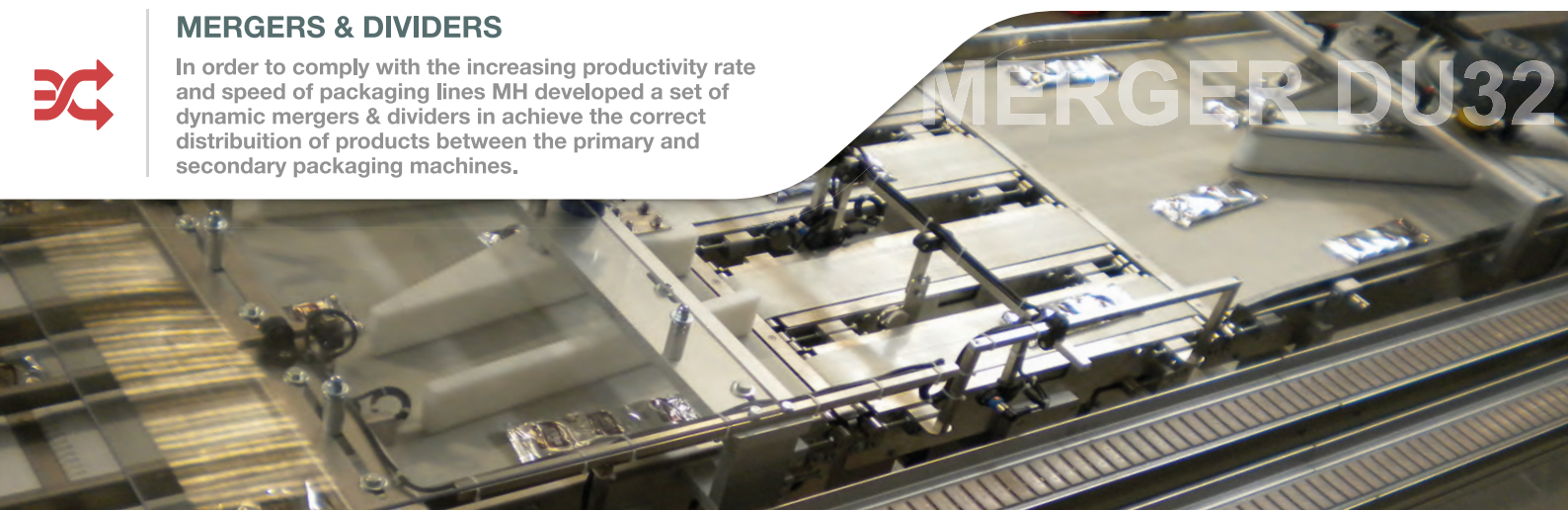
MH is specialized in buffering solutions LIFO zero pressure both with single or double spiral for packaged product or FIFO with multiple belt for the naked one.



BAT BUFFER

## MERGERS & DIVIDERS

In order to comply with the increasing productivity rate and speed of packaging lines MH developed a set of dynamic mergers & dividers in achieve the correct distribution of products between the primary and secondary packaging machines.



MERGER DU32



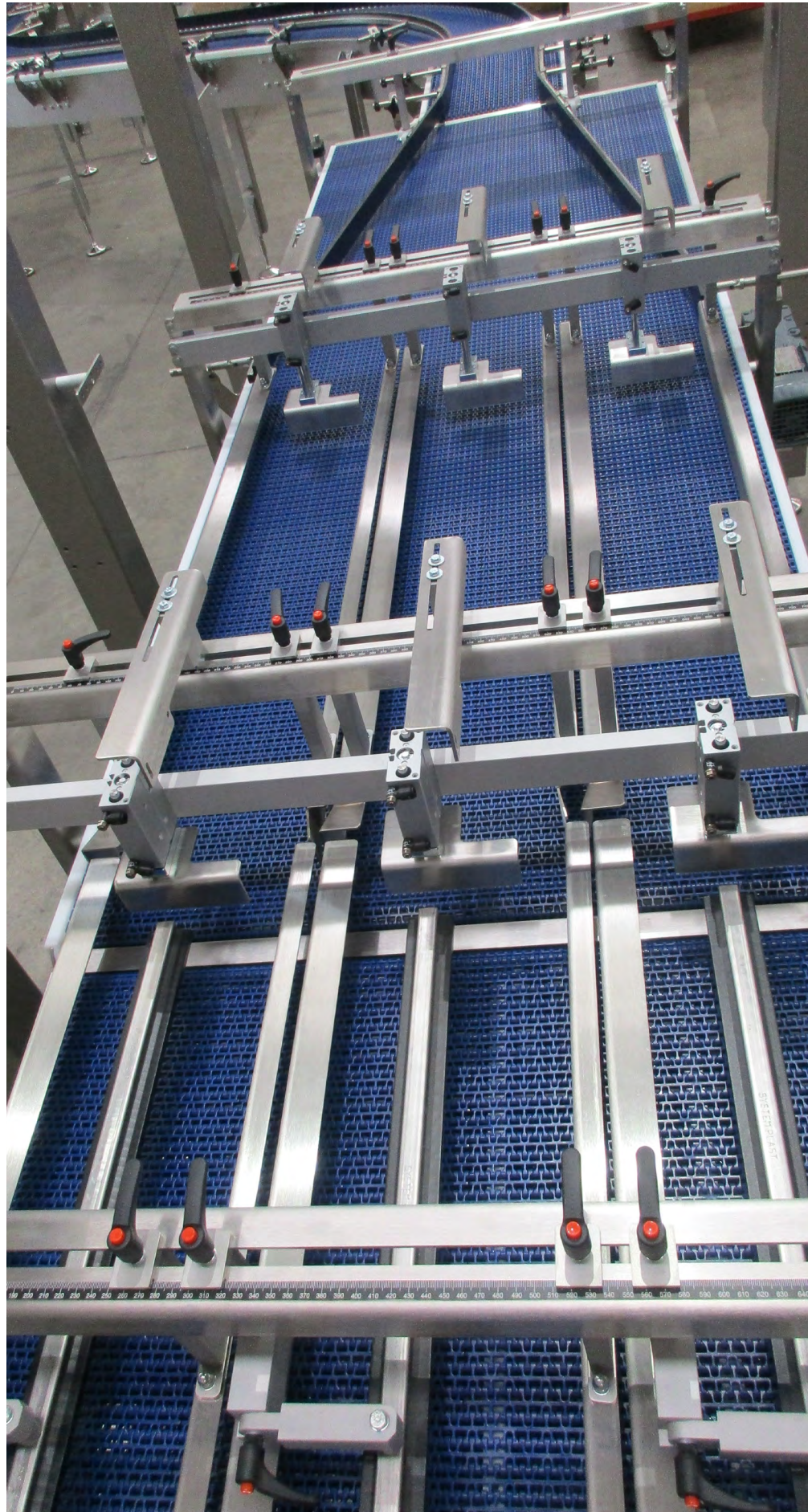


to handle the situation, or it is necessary to normalize the flow with a slow-down belt and an acceleration one after the unifier, which clearly requires more footprint, two extra motors and a more complex control logic.

When these premises are not verified and the products cannot be accumulated, due to the risk of overlapping (typically flowpacks or pillow bags) or damage due to excessive pressure or because the downstream machines require the products to be presented at a regular frequency with adequate distance between one product and another, then it is necessary to use a **dynamic system**.

A dynamic merger is a scalable system composed of a series of phasing belts that speed up or slow down the products arriving from the incoming rows in order to create the necessary gap to prevent two pieces from appearing at the convergence point at the same time. In these devices products are dealt with always one by one thus avoiding to have group of products while ensuring a regular spacing. As the production rate increases, the number of phasers required also increases. The fastest machine developed by MH is the HP dynamic systems that can reach throughputs up to 600 ppm for 150 mm long flowpacks. Depending on products' weight and packaging up to 5 phasing conveyors with brushless drive and vacuum suction can be used to handle the steep accelerations. 🏭

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





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# Egypt to host the 10th edition of AFRICA FOOD MANUFACTURING

*The Region's Most Comprehensive F&B Exhibition – In May 2022*

Informa Markets, the leading company in event and exhibition organisation worldwide, announces the launch of the 10th edition of Africa Food Manufacturing exhibition in May of 2022. The exhibition will be held in association with two of the biggest names in the Food & Beverage Manufacturing industry, Fi Global and ProPak, to provide innovative solutions and access to the regional market through Fi Africa and ProPak MENA. After the huge success of the 2021 edition, this strong partnership will return for the second year in a row for a new and improved edition of the renowned exhibition. From the 29th to 31st of May 2022, the highly anticipated Africa Food Manufacturing exhibition will take place at Egypt International Exhibition Centre (EIEC) in Cairo, Egypt.

The joint presence of two brands under one roof is in keeping with the exhibition's objective to create a F&B trade hub for the region in Egypt. The food ingredients manufacturing and processing show, Fi Global, which is currently established in 11 different countries around the world will present its regional edition, Fi Africa, along with second brand partner, ProPak Global (for food packaging), which maintains a large presence in 6 different countries and will participate in its regional version as ProPak MENA.

From his side, Mostafa Khalil, Africa Food Manufacturing Exhibition Director stated: "We have a strategic commitment to assert our leading role in supporting the directions taken by

- *Fi Africa and Propak MENA re-join as partners in 2022 after the huge success of their launch at Africa Food Manufacturing 2021.*
- *Bakery & confectionery are new additions to Africa Food Manufacturing 2022, serving the growing market demand for these products in the region.*
- *Specialised workshops will be held at the In-Person event, along with year-long networking and knowledge sharing opportunities.*



Egypt through two main pillars: the first is the establishment and development of national industries, and the second is the expansion of the export sector and the opening of new markets for Egyptian products. Accordingly, we always keep these goals in mind when planning for the launch of our platforms."

He added: "This year, in addition to our ongoing initiatives for the event, we are planning to significantly contribute to the support of emerging talents and innovative ideas through a competition for start-ups. It will take place for the very first time during the upcoming edition, where financial prizes could reach up to \$500,000."

Africa Food Manufacturing is known for its new initiatives and significant contributions to the multibillion-dollar F&B industry. It aims to bring together regional and global professionals as well as experts in the food & beverage manufacturing industry, including high-end brands of food ingredients, processing, packaging, and logistics. The



main objectives behind Africa Food Manufacturing are to provide the market with the latest industry information year-round, and to create endless networking opportunities. This is done in a range of ways including, webinars, market reports, and news, along with the hosting of this exhibition on an annual basis to facilitate meaningful connections among all parties involved.

This year, in response to increasing market demand, Bakery & Confectionery products are new additions to the event. The Middle East and African bakery and confectionery products' market is projected to grow at a CAGR of 2.2% by 2025, whereas the Chocolate market alone is forecasted to reach USD 6.5 billion growing at a CAGR of 6.72% during the same period. The event will allow relevant businesses to gain increased visibility and establish more connections across the entire value chain, making this event the ultimate one-stop-shop for the industry.

Aligning with the exhibition's goal to connect industry experts and create a massive network of professionals, Africa Food Manufacturing is providing a digital matchmaking program. With this initiative, visitors and exhibitors with common business interests and activities will be paired together so they can connect and do business

more easily.

This will allow everyone to save valuable time and ensures the best possible outcome for both parties. It is also worth noting that the show will include a "Hosted Buyers" program for distinguished high-end visitors from the Middle East and Africa to bring in more trade opportunities to exhibitors and partners.

The 10th edition of Africa Food Manufacturing is set to be the biggest edition in the history of the event, with more than 300 companies from 20 countries participating.

During the 3-day tradeshow, more than 8,000 local and international visitors are expected. In addition, the event will host several conferences and workshops throughout, where two dedicated learning tracks, "Food Ingredients and Manufacturing" and "Packaging and Logistics", will run in parallel with the exhibition to deliver cutting-edge information and facilitate knowledge sharing. 🏛️



## Africa Food Manufacturing



Food ingredients  
Africa

PROPAK  
MENA


**FOOD**  
processing



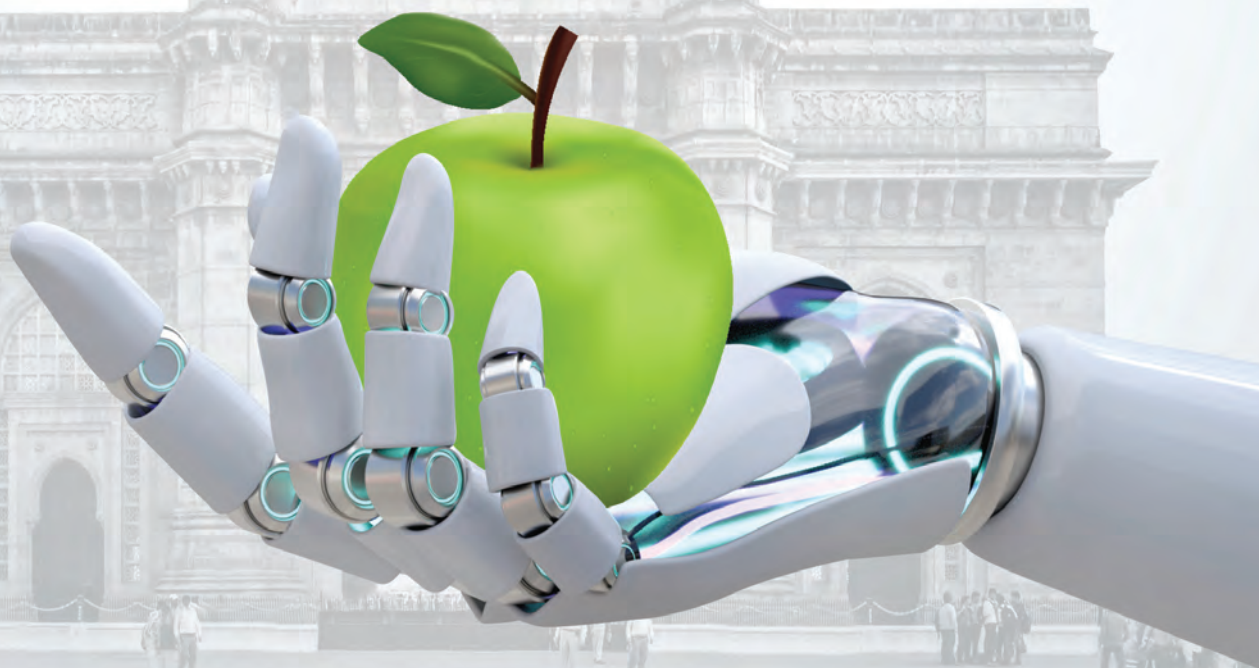
# International supplier fair for the food and drink industry



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# 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.

## 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.

## 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.

### GULFHOST

08-10/11/2022   
DUBAI

Fair of hospitality.

### GULFOOD

20-24/02/2023   
DUBAI

Fair for food and hospitality.



# EXHIBITIONS 2022-2023

## 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.

## LATINPACK

29-30/06/2022 

SANTIAGO CHILE

International packaging trade fair.

## FISPAL

21-24/06/2022 

SÃO PAULO

Fair for product from packaging.

## 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.

## SAVE

26-27/10/2022 

VERONA

Fair for automation, instrumentation, sensors.

## 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

Exhibition & Conference on Food & Beverage Technologies Trends.

## 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

Exhibition & Conference on Food & Beverage Technologies Trends.

## BRAU BEVIALE

14-16/11/2023 

NUREMBERG

Fair of production of beer and soft drinks.

## EAST MARKETS 2022/23

### BEVIALE MOSCOW

29-31/03/2022 

MOSCOW

International trade fair for the beverage industry.

### UPAKOVKA

24-27/01/2023 

MOSCOW

International packaging machinery exhibition.

### INPRODMASH

13-15/09/2022 

KIEV

International packaging machinery exhibition.

### BEVIALE MOSCOW

14-16/11/2023 

MOSCOW

International trade fair for the beverage industry.

### AGROPRODASH

10-14/10/2022 

MOSCOW

Fair of machinery and equipment for agroindustrial industry.

### MODERN BAKERY

2023 

MOSCOW

Fair for bakery equipment and food ingredients.

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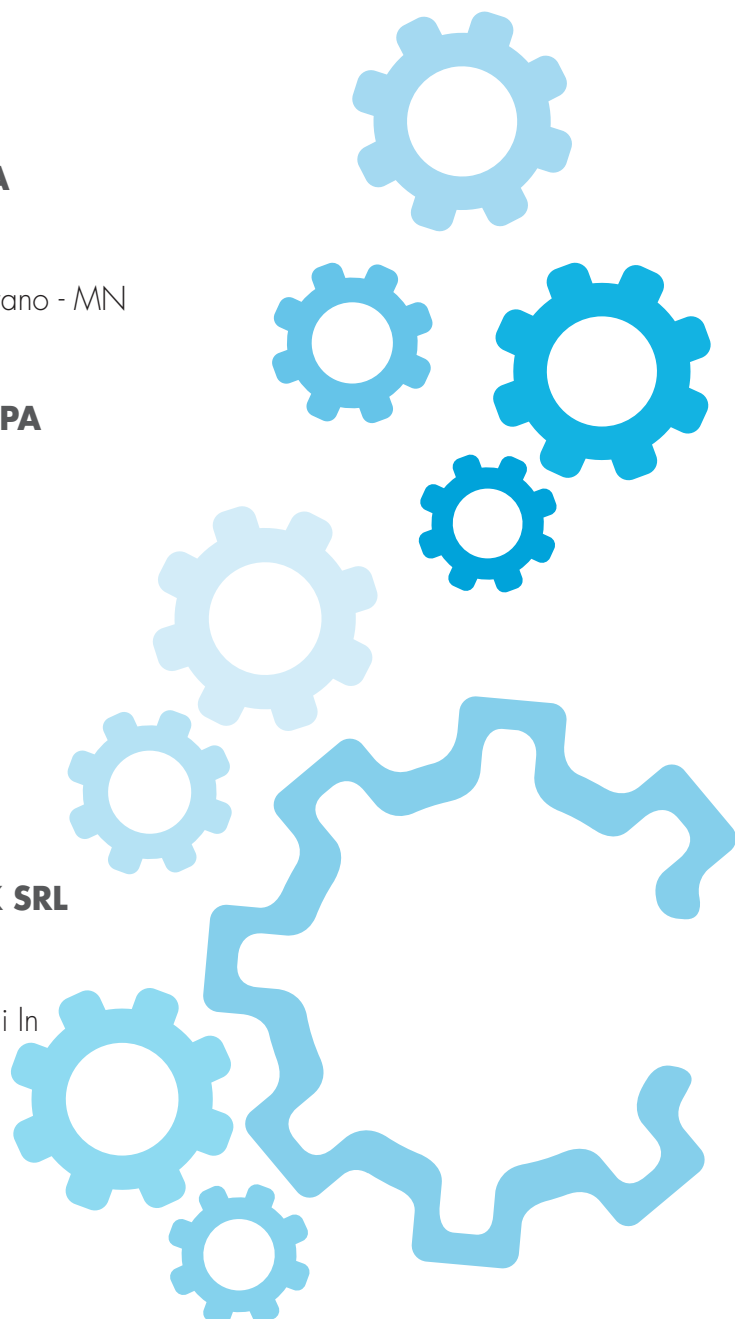
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