beverage & packaging

PROCESS AND PACKAGING





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The only limit is our customer's

IMAGINATION

Our Customers have unique needs and our drive is providing them with Tailor Made Solutions.

That's why, for every Customer we develop a Customized System Designed, Engineered, Produced and Installed around their needs.



















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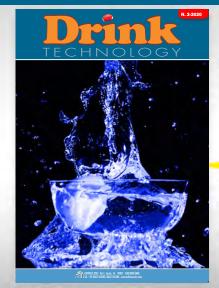
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DRINK TECHNOLOGY MAGAZINE

Digital magazine in English focusing on lines, plants and equipment for bottling and beverage industries. Four issues a year, delivered to more than 20,000 beverage industries and to more than 3,000 suppliers, worldwide. The magazine has an extra launch before all the main international exhibitions about beverage technology.



vww.drinktechnologymag.com



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SYNONYMOUS WITH QUALITY, RESEARCH AND CUTTING-EDGE PRODUCTS.

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Machineries, plants and equipment for food and beverage industry

year XXXII - issue n. 4 - September 2021

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Italian Magazine Food Processing Europe: single issue: Euro 25 Annual (six issues): Euro 120 Outside Europe: single issue: US\$ 30 Annual (six issues): US\$ 170 Subscription payment can be made in the name

of Editrice Zeus sas, by bank money transfer or cheque.

Italian Magazine Food Processing

An outline of the suppliers of machines, plants, products and equipment for the food industry. Published:

Registration: Court of Monza no. 10 of 05.09.2018

Shipment by air mail art.2

comma 20/b law 662/96 - Milan

Panorama dei fornitori di macchine, impianti, prodotti e attrezzature per l'industria alimentare Periodicità: mensile. Autorizzazione del Tribunale

di Monza, n.10 del 05.09.2018

Spedizione in a. p. 45% art. 2 comma 20/b legge 662/96 Filiale di Milano

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RUMMO IS BORN AGAIN THANKS TO UNIQUE PARTNERS

The combination of multiple skills gives rise to customized and efficient projects. ICI Caldaie proves to be a precious partner for energy efficiency paths

n October 2015, severe weather conditions hit the Sannio area in the Campania region. The heavy rainfall caused the overflowing of three rivers – Calore, Tammaro and Sabato –, covering the industrial area of Ponte Valentino with water and mud. The storm violently hit the historic Rummo pasta factory, destroying the machinery, damaging the raw materials and stopping production.

Despite the irreversible damages, the management never considered the idea of shutting down. Thanks to the determination of its employees, about 150, and with the help of the Web, a spontaneous campaign of solidarity began on the social networks, prompting consumers and supermarkets all over Italy to buy Rummo products.

#SAVERUMMO IS ICI CALDAIE'S CONTRIBUTION

The hashtag #saveRummo went viral and the brand made fun of the tragedy with the slogan "water never softened us". Rummo is a family-run business that has been producing durum wheat semolina pasta since 1846, exporting it to 45 countries all over the world and continuing to do so for a long time thanks to both the management and employees' hard work and passionate commitment. Other invaluable protagonists in this history of rebirth are the many partners with whom the pasta factory works - qualified and reliable professionals who have supported the cause from the very beginning.

Among them is the Venetian company ICI Caldaie, which has contributed

to the energetic improvement of the factory with its expertise.

The beginning of a successful collaboration

The year after the flood, Rummo decided to improve the modernization of its plants with the desire to significantly reduce primary energy consumption yet maintaining its high-quality standards.

To achieve this ambitious goal, Rummo decided to turn to an important ESCO (Energy Service Company) operating in the industrial sector, S4E System (www.s4esystem.it). This company had been working for some time with ICI Caldaie, an Italian boil-











ers and steam generators manufacturer based in Verona. S4E System soon promoted the beginning of a wider collaboration between Rummo and ICI Caldaie, being it a company at the forefront in the Italian scene. Since the beginning of the new century, ICI Caldaie has been working on the research of possible alternatives in the energy sector, aiming at reducing carbon dioxide production and building effectively sustainable plants.

To do so, ICI Caldaie has always relied on the collaboration with national and international partners, including research centres, universities and manufacturing companies, and on innovative methods (including design thinking, a person-centred process aimed at solving complex problems). ICI Caldaie, in fact, strongly believes that only through a

multifaceted and versatile know-how it is possible to create a truly efficient and functional system. In the specific case of Rummo, the challenge was to continue to improve the quality of its production, reducing both energy costs and the company's environmental impact. Making use of each other's expertise, ICI Caldaie and S4E System developed several solutions that perfectly met the requirements of the pasta factory.

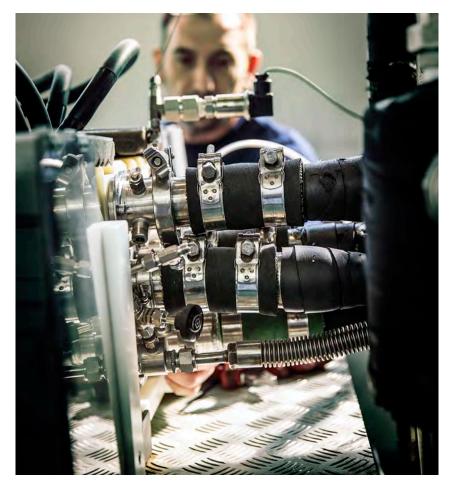
Interventions and results

The design and modernizing activity was performed throughout 2016 in collaboration with the plant technicians, and ended in 2017. The interventions mainly focused on the heating plant, but also involved the refrigeration plant, the compressed air plant, the vacuum plant and the general energy monitoring system of the heating and refrigeration plant,

including the Energy Diagnosis procedure according to the Legislative Decree 102/2014. The main intervention in the heating plant was to improve the production efficiency of superheated water. S4E System identified the main problem, detecting an ex-ante situation with an efficiency of 86% characterised by the presence of a boiler that used diathermic oil as an intermediate heat transfer fluid for the production of superheated water at 140°C.

On that specific boiler, there was a combustion air preheater. It was thus decided to improve the efficiency of superheated water production by introducing an ICI boiler ASGX EN 6000 superheated water boiler of 6 MW, equipped with economizer for heat recovery on flue gases and characterized by a nominal useful efficiency of 94%.





To date, the boiler working on the three pasta production lines in Room 2 produces at full capacity about 50% of the nominal power. This translates into a methane consumption saving of 200,233 Sm3/year, corresponding to about 58,000 €/year. The new system configuration also eliminates the diathermic oil circulation pump (diathermic oil pump Q=400mc/h H=35mt c.l. Pel ass= 45kWel) with a consequent electricity-saving equal to 356,400 kWh/year, about 28,500 €/year.

The energy efficiency path has thus produced the expected results: lower costs and reduced environmental impact. Overall, the intervention conceived by S4E System and carried out through the introduction of an ICI Caldaie boiler has led to saving about 234 TOE/year, a cost reduction of about 86,500 €/year and a decrease of about 520.86 tons of CO2. The energy improvement process is not limited to this but has involved other sectors with excellent

Annual savings in the Pasta Rummo's plant thanks to the interventions ICI CALDAIE and S4E





TOTAL ECONOMIC SAVINGS

154.100 €/year



TONS OF CO, SAVING EVERY YEAR

800 Ton/year



equivalent to the emissions of 100 medium-sized cars that make 65,000 km



TOTAL POWER SAVING

1.202.359 kWh/year

	of which:	1	from interventions in: BOILER ROOM	56%
		*	COOLING STATION	15%
		0	COMPRESSED AIR STATION	17%
		12	VACUUM STATION	12%
	of which:		from interventions in:	
			BOILER ROOM	65%
		業	COOLING STATION	12%
		0	COMPRESSED AIR STATION	13%
		12	VACUUM STATION	10%
	of which:		from interventions in:	
			BOILER ROOM	30%
		*	COOLING STATION	24%
		0	COMPRESSED AIR STATION	27%
		10	VACUUM STATION	20%



results. In the refrigeration plant, for instance, a reduction in energy consumption for the production of chilled water has been achieved by changing the system configuration and improving the efficiency of chilled water production by achieving an EER of 4.5.

This result was made possible thanks to inserting refrigeration units with screw compressors under inverter and replacing the plate heat exchanger with direct exchange and mixing hydraulic disconnector to work at the same temperatures as the cooling tunnels of 14 °C. The electricity saving is equal to 282,972 kWh/year, equivalent to about 22,600 €/year, i.e. 93 tons of CO2 less released into the atmosphere. As for the compressed air power plant, the ex-ante situation was based on fixed speed compressors.

These were replaced by inverters compressors, which resulted in an electricity saving of 30%, about 325,387 kWh/year, corresponding to about 26,000 €/year and a reduction of about 107.38 tons of CO2. Finally, in the vacuum plant, the vacuum pump has been replaced by a liquid ring pump cooled by the chilled water produced by the Fridge Units with an air-cooled pump.

This replacement has allowed a saving of electricity of 30 kWel in addition to the non-use of chilled water for cooling, which means a saving of electricity of 237,600 kWh/year, equivalent to about 19,000 €/year and about 78.41 tons of CO2 less released into the atmosphere. S4E System has also introduced an energy monitoring system for the heating and cooling plant, and also installed switchboards with PLC and digital interface to replace the previous electromechanical switchboards with no digital interface. In 2019, Rummo commissioned S4E System to carry out and transmit the Energy Diagnosis procedure according to the Legislative Decree 102/2014.

From a critical situation, the right partner helps rise to success

When the client's initial needs are fully met, there is no question of success. Success is made possible by the vision of those companies that no longer think themselves in terms of simple producers, from an individual perspective, but see the project on a larger scale. Only if driven by the desire to achieve a comprehensive solution one can establish partnerships with other companies that have different specializations and bring together multiple skills to develop complete projects. With this ambition in mind, a company like ICI Caldaie collaborated in the energy improvement process of another company, in this case Rummo, not simply offering its boilers, but participating in a design process that involved many other areas. Starting from a specific urgency, making useful energy-saving actions, it has been possible to create a condition of saving in a wider sense, making the company sustainable while maintaining the high-quality standards of its efficiency and productivity.

This story teaches us that with the right partners, it is possible to create not only a product but a complete and innovative tailor-made system.

www.icicaldaie.com



€ 58,000 from fuel saving | € 28,500 € from power saving

€ 22,600 from power saving

€ 19,000 from power saving

€ 26,000 from power saving

520,86 Ton/CO₂ saving 93 Ton/CO₃ saving

107,38 Ton/CO₂ saving

78,41 Ton/CO, saving

356.400 kWh/year saving 282.972 kWh/year saving

325.387 kWh/year saving 237.600 kWh/year saving



FUEL SAVINGS 200.233 Sm³/year

equal to

- 9%

compared to previous consumption











How Kuchenmeister Ensures Product Safety

uchenmeister GmbH been producing delicious baked goods and confectionery specialities for over 130 years. The mediumsized, family-owned company with its headquarters in Soest is the market leader for ready-to-serve cakes in Germany as well as the international market leader for the German specialities, Baumkuchen and Christmas Stollen. For more than 20 years, the industrial bakery has relied on product inspection solutions from Mettler-Toledo.

'Baking is our passion' is the motto used by Kuchenmeister

with its 1000 or so employees, who produce more than 90,000 tonnes of cakes a year, which are distributed worldwide both under the company's own brand 'Kuchenmeister' as well as food retailer brands. The company, which is certified at IFS Higher Level, maintains ten production lines in three-shift operation at its main factory. Mettler-Toledo's product inspection equipment is used for foreign body detection and product conformity along the entire production line, from incoming goods through processing to checking packaged products.





X-ray inspection for incoming goods

Kuchenmeister is committed to minimizing risks to consumer and product safety and, when in doubt, always errs on the side of caution. For example, the company sources pre-washed raisins for use in its Christmas Stollen, but subjects these to cleaning again prior to processing and then checks them for foreign bodies using x-ray inspection. This is because, with natural products, there is sometimes a danger that foreign objects, such as small stones, can get into the crop during the harvesting process and cannot be completely removed with 100% certainty during the washing processes.

X-ray inspection is the method of choice here for reliably detecting foreign bodies such as stones, glass, rubber, metal and highdensity plastics. "By checking incoming goods for foreign bodies, we simultaneously minimise the risk of small stones or metal parts causing damage to production machines and resulting in downtime further down the line," explains Thomas Engel, Head of Quality Management at Kuchenmeister.

Feedback control ensures product quality

The ingredients inspected in goods-inwards are processed into various products such as stollen, croissants or pound cakes and baked. Dynamic checkweighers check whether the cake moulds are filled with the intended amount of batter. Thomas Engel explains,



"The right amount of batter is not only an important factor in achieving the correct final weight. It is also a central quality parame¬ter for ensuring the optimum level and cooking browning." Dynamic checkweighers therefore continuously optimize the filling process by means of fully automated feedback control. If the check-weighers detect a tendency to over-fill or underfill, they automatically trigger a reduction or increase in the volume of batter at the filling station. In this way it is possible to effectively avoid costly product waste caused by overfilling as well as ensure compliance with regulations by eliminating underfill.

Seamless final inspection

X-ray inspection systems and metal detectors at critical control points (CCPs) carry out checks for foreign objects before the baked goods are shipped. The individual

product and its ingredients as well as the type of packaging determine which technologies are used. For homogeneous products such as pastry cases or croissants, the company relies on metal detection technology. This detects foreign bodies from ferrous metals such as chromium, non-ferrous metals such as brass and aluminium but also magnetic and non-magnetic stainless steel. In the case of croissants, foreign bodies are detected by means of a free-fall metal detector integrated into the vertical packaging line. The freshly baked goods fall from above, through the metal detector, are checked and land directly in the sales packaging. Foreign bodies in products such as the traditional German ring cake, Gugelhupf, as well as most pound cakes, are detected using x-ray inspection systems. These have a horizontal conveyor belt and inspect up to 3000 units/hour. Contaminated products are removed from the production line by means of a pusher reject device. "In order to best ensure product safety for our customers, we use x-ray inspection systems on the lines where the product or packaging variant requires it," says Engel. Foil packaging containing aluminium has become significantly more important in baked goods in recent years.

It is well suited to baked goods such as pound cakes, as hardly any moisture is able to escape. The cake does not dry out, is longer lasting and protected from aroma exchange in virtually airtight packaging. For foreign body detection this presents new challenges: metal detectors are pushed to their limits when it comes to distinguishing metallic foreign bodies from the metalpackaging. containing Unlike x-ray inspection systems where packaging containing aluminium does not affect the accuracy of





detection, these systems can look through the aluminium foil and detect foreign bodies with a higher density than the product.

Top priority: line availability

On seven of the ten production lines, there are no product changes. Failsafe operation and availability are top priorities for the company in ensuring it is able both to produce its own-branded products and deliver its food retailer branded products. Thomas Engel refers to the production of croissants as an example. "We bake about 33,000 croissants per hour. It is easy to see what damage can be caused by several hours of downtime on a production line. Not to mention possible penalties if we are unable to deliver our food retailer brands on time. To put it bluntly, we cannot afford downtime of the production line due to a defective inspection device. That is why we have a Comprehensive Care Service Contract in place with Mettler-Toledo. This not only covers the costs associated with labour and spare parts, but also includes regular maintenance and cleaning measures as well as functional tests including, in particular, the exact scheduling of maintenance measures. The service intervals agreed in the Comprehensive Care Service mean that the baked goods manufacturer is able to avoid maintenance-related production losses.

Thomas Engel explains, "If a seasonal product changes, for example our Christmas stollen, this means that the line must be customised and adapted to suit the new product. As the production line already has to be at a standstill for this to occur, we use this opportunity to have the necessary service and maintenance work carried out in accordance with the schedule."

In addition to its own technicians and the Comprehensive Care Contract, Kuchenmeister also maintains its own spare parts warehouse, which ensures fast in-house repair times in the case of line failures. Toothed belts, drive and guide rollers as well as infeed and outfeed belts are stored at the Kuchenmeister site. Operators, service maintenance staff as well as quality managers are trained regularly by Mettler-Toledo to ensure they are able to optimally operate and maintain the equipment. In this way, Kuchenmeister has been able to increase its overall system effectiveness and simplify the provision of evidence as part of its auditing procedures.

Long-established single-source strategy

Kuchenmeister has been putting its trust in Mettler-Toledo's production inspection technology for more than two decades. "Our philosophy is to rely on a single-source strategy," says Thomas Engel. "We have one contact person for our product inspection technology and can coordinate everything – be it service and maintenance appointments or modernisation measures - via that one contact person. Since we are completely satisfied with how this cooperation has worked until now, we see no reason to deviate from this philosophy. By the way, we apply this strategy to compressors, for example, and to other areas as well."

Thomas Engel has been impressed by the longevity and reliability of the equipment: "The oldest Mettler-Toledo product inspection device that we use here, a dynamic GARVENS checkweigher, has been running for 20 years. However, our goal is not to achieve the record for age or endurance. So far, we have had no reason to replace the device at this station. Normally, we will replace and modernise our inventory of inspection equipment whenever it requires additional functionality or when an increase of the overall equipment effectiveness of the line is required," says Engel. Kuchenmeister always combines the installation of new inspection equipment with an introductory training for its operators by Mettler-Toledo. Twenty years collaboration has given Kuchenmeister a comprehensive overview of the advances and developments in product inspection technology over the past two decades.

"Much has happened, not only in terms of detection accuracy. This is reflected, for example, in the higher energy yield of today's x-ray generators, the increasingly optimised hygienic design and their compact construction, requiring less floor space or in the 5-year that Mettler-Toledo warranty gives on new x-ray generators," summarizes Thomas Engel and provides an example: "We recently placed a new combination device, consisting of a dynamic checkweigher and а detector, in the packaging line for children's croissants. With this, we combine foreign body detection and weight checking in one compact, space saving device. Coupled with the easy-to-use touchscreen, the process security offering protecting us from operating errors, the quality of the documentation for inspection results and the ease of analysing these, I believe we have found an optimal solution on this line with Mettler-Toledo, and I could even extend the list to include all the advancements which have come about over the past twenty vears".

For further information, see:

www.mt.com/pi-pr













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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.

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Since the beginning Lawer has always implemented the strategic decision to invest on people, research and new technologies. Thanks to the analysis and development of the technical department the company

shows its strong projecting capabilities. The task of finding the most innovative technical solutions for the systems continuous improvement is essentially provided by a qualified and professional team, which is constantly updated and trained with new technologies.

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

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

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

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

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

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

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



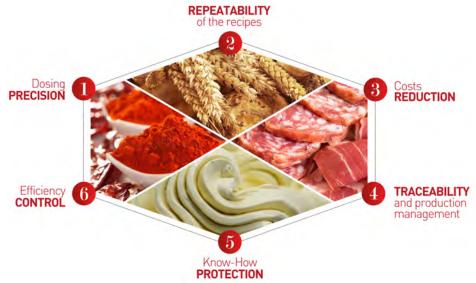
single raw material or each single recipe accessing to a protected area.

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

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

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

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



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

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PROFESSIONAL BAKING SOLUTIONS

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



stablished in 1990, EU-ROPA has been selling professional ovens to a large number of bakeries, pastry and pizza shops, hotels and supermarket chains.

The brand EUROPA has become synonymous with reliability and innovation, specializing in the production of commercial ovens and equipment for bread, pastry and pizza baking.

Located in the North-East of Italy, the company has always had a strong international vocation; in fact, EUROPA worked hard during the years to be present in new markets, being active now in more than 80 countries in the world, thanks to the continuous creation of simple, USER-FRIENDLY products but, at the same time, with the BEST TECHNOLOGY and 100% MADE IN ITALY.

The company grew and expanded in a very short time, leading the business over the main international markets. This could happen thanks to a dynamic team, characterized by a professional and fresh approach. The management group has always been supported by a qualified and experienced technical staff, ready to understand market's requirements and to meet customers' needs. Experimentation and research, in fact, have always represented the primary purpose of this company.

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

From the identification of the best

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

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

The BLACK LINE offers a large number of OVENS and PROVERS suitable for artisan bakers, industrial bakery/pastry/biscuits productions and supermarket chains. In this line, you can find: rack ovens, electric deck ovens, steam tube deck ovens, multiloading deck ovens and provers.

Among all our products composing the BLACK Line, a special mention





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

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

This product has been created fully understanding bakers' work routine: in fact, GALILEO has been studied to simplify the cleaning and the ordinary maintenance. Besides, the improved combustion chamber, completely renewed with innovative technologies, has allowed to reach a very high efficiency, with surprising recovery times and very low average consumptions.

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

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

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

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BAKERIES, HOTELS, FAST FOOD, RESTAURANT and PIZZERIA, allowing the customers to create the perfect partner for their own workplace.

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

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This approach allows us to serve the industry better than if we were acting separately. We can optimise resources, ensure global coverage and local services, share experience and guide our customers towards solutions that will respond closely to tomorrow's market trends. From concept to installation, we supply turnkey lines or single machines on



a case-by-case basis.

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THE WEALTH OF OUR EXPERI-ENCE AT YOUR SERVICE

Countless solutions are available from our cluster of specialist companies, starting with divisions that are the backbone of the IMA Group. Processing technologies are accounted for by IMA ACTIVE based on our experience in mixing, granulation, tableting and coating. Thanks to a dedicated laboratory both in Italy and in the USA, customers benefit from expertise and support to test, develop and optimise products and processes. IMA GIMA contributes with experience in primary packaging, provid-

ing solutions for gum, soft, chewy and hard candy and jellies. These include wallets, cartons, tins, jars and bottles; stand-up cartons also for chocolate and nougat. Furthermore, the division's engineers also design the packaging lines starting from the package itself in order to supply a tailor-made solution. With experience stretching back over decades, IMA SAFE specialises in blister packaging, counting and cartoning for gums and candies. Already part of IMA FLX, our flexible packaging hub, where we develop the most advanced technologies for flexible packaging and research eco-compatible solutions, companies such as IMA ILAPAK, IMA DELTA SYSTEMS (USA), IMA EURO-SICMA, IMA TECMAR (Argentina) all contribute to making the new cluster of Confectionery specialists a one-



stop answer for packaging excellence.

They account for Vertical and Horizontal Form Fill & Seal machines for any type of confectionery product. including lollipops, marshmallows, choco tablets and bars as well as those listed above. Packaging varies from Doypacks to block bottom and quad seal bags, and pillow bags. Secondary packaging or end-of-line solutions come in the form of overwrapping, stretch and shrink wrapping, top and side-loading cartoners for display boxes, wrap-around tray packers, multipurpose cartoners, side-loading, top-loading and wraparound case packers, and palletizers. These are developed by IMA GIMA, IMA CIEMME and IMA BFB.

Explore the new dedicated website now>> https://sensingfuture.ima.it/makethemost/sequence/17

TESTING THE FUTURE OF THE INDUSTRY AT IMA OPENLAB

Eager to partner our customers with more than the technological solutions and machines we provide, IMA offers a dedicated research service allowing us to innovate together with companies keen to develop packaging materials of the future. Focusing on sustainability as a key value, we are constantly testing new flexible packaging materials to ensure they guarantee maximum machinability on our equipment.

This is just a part of our consultancy service, whose aim is to devise integrated processing and packaging lines to enhance the quality and efficiency of your production. Latestgeneration solutions to increase your performance, developed as a team composed of IMA experts, material suppliers and companies from the confectionery industry.

MAKE THE MOST IN THE CHOCO & CONFECTIONERY MARKET - OUR SPECIAL ONLINE EVENT

Ready to give a shape to this new cluster, we welcomed more than 150 users and companies interested in exploring the benefits of a single provider with a world of experience and a promise of innovation. On May 27th and 28th we hold a live online event to present the entire offering to participants, directly from our Sensing Future platform. The following day, the event was repeated to enable our North American audiences to enjoy the presentation at convenient times.

If you missed the event, you can now rewatch the video on-demand.

Register at the link below and enjoy an overview of our solutions for all stages of your process.

Log in now https://sensingfuture.ima.it/user/login 🏛

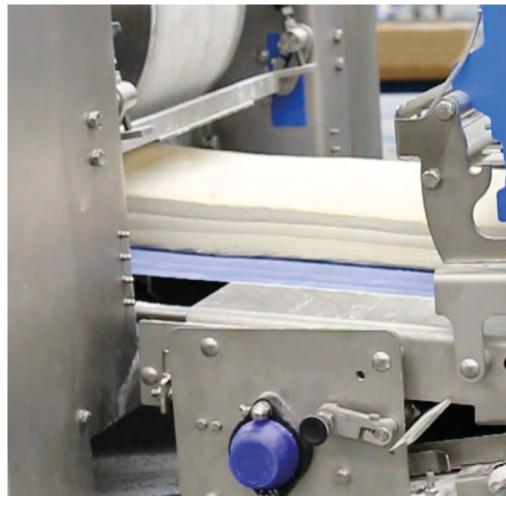


THE SECRET OF **RADEMAKER**: CONTINUOUS INNOVATION IN THE RADEMAKER INDUSTRIAL BREAD LINE

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

Four components

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



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

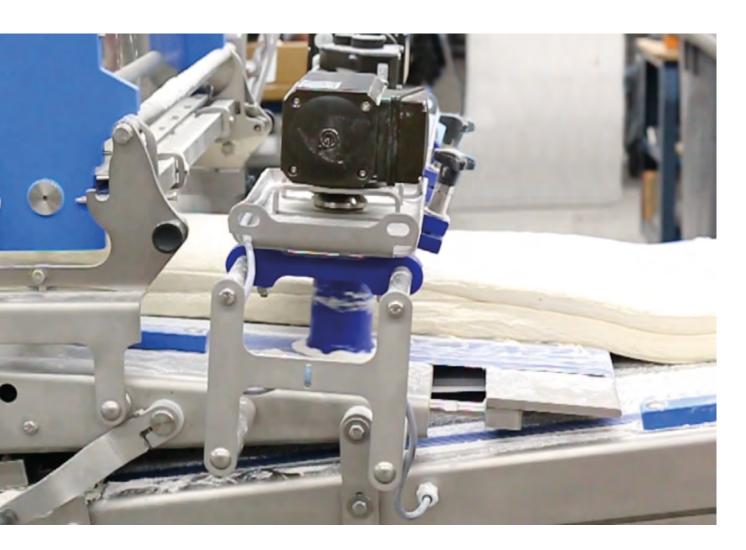
Unique pre-sheeting system

Sheeting the dough is essential for the final product. The dough is kneaded by the mixer and processed in the pre-

sheeter. The pre-sheeter transforms dough batches into a continuous dough sheet. Rademaker sets itself apart from its competitors with its proven Double-chunking Sheeting system (DSS), which has been updated to meet the latest requirements. An innovative dynamic hopper transports the dough in a controlled manner, keeping the shape of the dough chunks linear and constant. Landscape sensors and separate belts carefully guide the chunks in the sheeter, ensuring size and weight accuracy. Chunk weight and length is exceptionally accurate, leading to a more stable and consist-



Specialists in food processing equipment



ent dough sheet and eventually highquality baked products.

Cost savings and better overall performance

Many doughs, for instance Italian bread types like ciabatta or focaccia, tend to have a very high water percentage, making it liquid and sticky. In the previous DSS version, oil was used to prevent the dough from sticking to the DSS hopper. Effective as this is, cleaning the line is a time-consuming issue. Rademaker replaced oil by wax, reducing the required amount by a fac-

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

Superb dough homogeneity

Thanks to the minimal transportation

height difference in the pre-sheeting system, dough homogeneity and structure are maintained. The wider belts with advanced flour strewing and optimized waste bins, in combination with a design that meets the most stringent hygienic standards, allow for cleaner working. Compared to the previous version the new system is easy to operate and better accessible for cleaning.

Sheeting process

As part of the sheeting process, the continuous dough sheet created by



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

Flexible cutting in make-up & decorating

The final processing steps take place in the make-up & decorating section of the Rademaker Industrial Bread line. The design upgrade has resulted in a length reduction, a 400 mm wide rework conveyor and an increased hygiene level. The weighing conveyor was also reduced in length and fixed to the floor for greater stability and higher accuracy. Amongst the various product cutting solutions is a Box Motion Cutter. It offers different cutting processes in one machine and a unique dough sealing solution, sealing the softer dough products and avoiding products from cracking open during baking. Thanks to an ergonomic design, tools can easily be changed from the side, making it easy for the operator.

Fast products changeovers

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

Unparalleled dough recycling

Traditionally, a part of the dough ends up as rework, especially when working with non-rectangular shapes like





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

Flexibility and line length

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

Hygienic aspects

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

Work in progress

The Rademaker Industrial Bread Line is a work in progress, as Rademaker is continuously working on further improving the line, meeting and anticipating new customer demands, market developments and legal requirements. Rademaker thus offers a solution for every industrial bakery,

large or small. In addition to 'engineered to order' lines, Rademaker now increasingly focuses on 'configured to order' production lines, offering affordable standard solutions to most applications. With the flexible, reliable and robust Rademaker Industrial Bread Line, you are assured of the highest uptime, a long lifetime, and minimal spare parts consumption. Fast maintenance, cleaning and changeovers ensure efficient production. This, together with the excellent dough handling characteristics, results in a proven decreased cost of ownership. mm

rademaker.com



PERFECT MIX: PLANETARY MIXER WITH ELECTRONIC VARIATOR

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

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

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

Great innovation of the PERFECT Mix line is the innovative system of pouring the ingredients through a hole in the center of the planetarium.

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

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

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

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

www.sigmasrl.com







Meeting today's and tomorrow's requirements is our top priority. That is why we invest in the creation of new solutions, keeping up with the market, and your needs. Nearly 50 years' experience and a dynamic spirit, entirely made in Italy, have enabled us to evolve with new expertise and technologies, and guarantee efficacious, outstanding solutions at the service of professionals. www.sigmasrl.com



BOSS, AN UNCOMPROMISING OVEN

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

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

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

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

In the planning stage we have worked hard on the consumption and the results are real, indeed the oven Boss 60.80 heats up very quickly and it needs only 50.000

installed kcal/h! This is possible thanks to a system of baking endowed with two powerful fans and an heat exchanger with triple turn of fumes and to a system of insulation consisting in three layers of rock wool compressed panels. As

for the consumption, this system is extremely virtuous and with the addition of reduced overall dimensions it is possible to position the oven side by side on its three sides. These features give you the possibility to save a huge quantity of space





a perfect cooking...always





BAKERY AND PASTRY EQUIPMENT FORNI E ATTREZZATURE PER PANIFICI



realforni.com



inside your place in comparison to any other oven in commerce.

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

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

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

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

This oven is perfect to separate the laboratory from the sale zone and it can be a great attraction both in shopping centers and in small bakeries because it guarantees a privileged view on the baking process, keeping a clear division between laboratory and commercial zone.

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





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

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

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



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

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

Products

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

Errepan offers two main lines:

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









Download the catalogue for the standard line



Visit the website

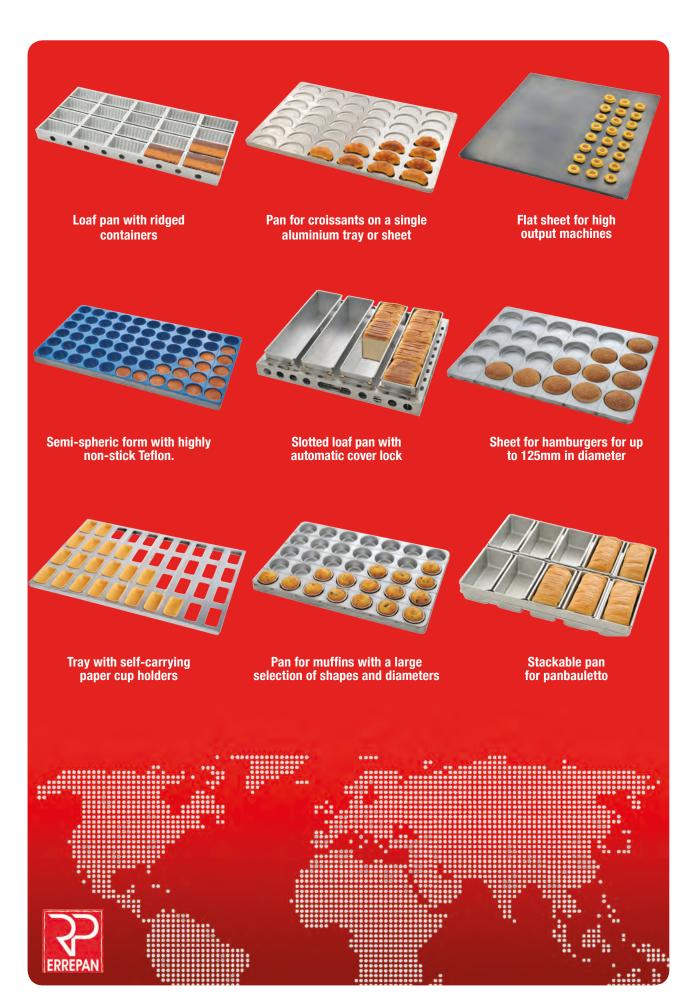
On its brand-new website, the company shows its products providing technical details and a wide range of pictures.

www.errepan.com















SIMPL-CUT™

The Simple Revolution

Roll-fed Labelling will never be the same.











FOOD & DAIRY

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

What's on the line?

Ingenious Cutting System

change blade in 10" without adjustment

glue roller before label cutting

Single Drum

for three operations: gluing, cutting, label application

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

All-In-One

Roll-fed cold glue and linerless pre-glued technology









SIMPL-CUT REVOLUTIONIZES LABELING MARKET

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

E. Labellers is one of the world's leading providers of innovative labeling solutions. The company's latest development is called Simpl-Cut™, and it is "simply" revolutionizing the Rollfed labeling market.

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

One of the biggest complaints about traditional roll-fed labelers is down-time associated with the frequent cleaning of the vacuum drum that transfers labels after they are cut. In traditional Roll-fed labelers, glue



can accumulate on the drum and in the vacuum holes.

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

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

Identikit:

- INNOVATIVE CUTTING SYSTEM IMMEDIATE BLADE CHANGE IN 10"
- GLUE APPLIED BEFORE CUTTING DRUM ALWAYS CLEAN
- ONLY ONE DRUM ZERO MAINTENANCE
- UP TO 5 DIVISIONS PER DRUM
 TOP LEVEL FLEXIBILITY AND SPEED
- NO-STRESS LABEL UNDERWAY
 EFFECTIVE MANAGEMENT
- TWO-IN-ONE MACHINE
 HOT MELT ROLL-FED
 AND LINERLESS PRE-GLUED





Simpl-Cut[™] completely innovative labeling solution, with cutting and gluing system that reverses the traditional principles of Roll-fed machines

A "Cutting Edge" Solution

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

 One of the most obvious benefits of the Simpl-Cut system, as the name implies, is the simplicity of the cutting system. Unlike traditional roll-fed labelers that use contrasting blades to cut the label, Simpl-Cut uses fixed blades on a rotating drum to very simply cut the label. The fixed blades are contained in a cartridge which can be changed out and ready to run in less than ten seconds. The process of changing and setting up blades can take hours in traditional Roll-fed labelers.

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





A Global Revolution

"The response from our clients has been outstanding," says Scott Smith, Senior Vice President of Business Development of ProMach, the global group leader in Packaging the P.E. Labellers in part of. "The problems that the Simpl-Cut technology is solving are universal, so these systems are being purchased by a wide variety of clients, from multinational soft drink manufacturers to regional bottled water companies."

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

structure to be able to support our clients around the world."

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

liked it so much that we ordered two Simpl-Cut machines. I expect this to be the standard for Roll-fed labeling moving forward."

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

www.pelabellers.com

CHANGEOVER ROLL-FED 1 2 3



CHANGEOVER SIMPL-CUT









Tecnologia per grandi numeri

MODULARITÀ, FLESSIBILITÀ, PRATICITÀ





L'etichettatura nei settori beverage, food, detergenza e industria farmaceutica è da sempre la nostra passione e la nostra prima attività.

Tecnologie innovative, una rete internazionale di vendita e di assistenza post-vendita e flessibilità operativa sono i nostri punti di forza.

La soddisfazione di ogni esigenza di etichettatura da 1.500 a 50.000 b/h il nostro risultato, apprezzato da aziende di ogni dimensione.

Gli oltre ottocentocinquanta impianti presenti ormai in tutto il mondo la nostra conferma più grande.



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



odularity, flexibility and practicality are key concepts in a company whose strong point is technological innovation and development. This is what the market wants and this is what customers get from the Italian based Makro Labelling, international standard setter for industrial labellers in the beverages, food, detergent and pharmaceutical sectors. The thirty years' experience of its founders, a team of 90 people, a dense and well-organised sales network consisting of the branch offices Makro UK for the United Kingdom and Makro North America in Saint-Philippe (Montreal) for Canada and the USA, together with agents and representatives in the most important countries throughout the world, plus an impeccable assistance and spare parts service guarantee satis-

faction of every labelling need and constant expansion on all the most important international markets.

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

The range includes labellers able to process from 1,500 to 50,000 bottles per hour, applying up to five labels per bottle and available in wet glue, hot melt, self-adhesive and combined versions. For companies with limited production requirements, the MAK 01, MAK 02 and MAK 1 labellers provide speeds of up to 12,000 b/h with mechanical or electronic rotation of the bottle plates. With special applications and able to cope with production speeds of up to 50,000 b/h, the MAK 2, 3, 4, 5, 6, 7 and 8 labellers, on the other

hand, satisfy the needs of medium to large companies. The range includes a high speed self-adhesive labeller with reel winders and non-stop system enabling production to continue at maximum speed even during reel changes and a combined labeller to apply the fiscal guarantee seal.

For the high volume PET market, such as the water and soft drinks sector, Makro Labelling has developed the **MAK Roll Feed** series of rotary labellers. The 6,000 b/h to 40,000 b/h production speed and use of wrap-round plastic labels on a reel with hot melt application guarantee maximum economic benefits in the production process. The modularity of the machine also allows the roll feed unit to be replaced with a hot melt unit for pre-cut, wet glue or self-adhesive labels. Again de-





signed for the water and soft drinks market, but needing between 6,000 and 16,000 b/h, the new series of **MAKLINE Roll Feed** labellers features motorised axles and brushless motors to minimise costs while maintaining meticulous labelling quality.

The new **double-station self-adhe-sive MAKLINE** is, on the other hand, designed for the beverages, food, detergent and pharmaceutical sectors. It packages large and small containers and offers the same high quality label-

ling as a rotary machine.

In common with the entire Makro range, the MAKLINE is fitted with the **Vision Control** system to verify the quality and correctness of the packaging and manage rejects. The **Follower** optical guide system (an exclusive patent) enables the bottles to be aligned for application of the labels in precise positions with respect to a reference on the bottle and reduces format change times and costs. It is available in carbon fibre and fitted with a line scan camera. Thanks to a special,

patented paper delivery system, the new **MAK AHS2** self-adhesive labelling module responds to the need for faster, more precise machines. It guarantees a linear speed of 100 metres a minute at a label pitch of 20 mm.

The technical and R&D departments monitor the market closely to understand its demands and anticipate them with new solutions able to offer efficiency, speed and a concrete response to specific labelling needs. Latest developments include the prototype of C Leap, a new, truly revolutionary labelling system, and two new inspection systems - M.A.I.A. (Makro Advanced In-line Analysis) and A.L.I.C.E. (Advanced Label Inspection and Control Environment) - which guarantee high performance, less production rejects and the highest finished product quality.

www.makrolabelling.it







ATTENTION TO INNOVATION AND RELIABILITY CHARACTERIZES END-OF-LINE AUTOMATION SOLUTIONS



Isola robottizzata con picker – Top loading unit with picker

eo Project Industries (GPI Group), through continuous research, based on a consolidated technological knowhow, designs and manufactures complete end of line systems, which have an optimal response in satisfying the requirements of its customers in the world.

The complexity of the problems faced and resolved constitutes the "benchmark" on which the skills of the staff who operate at various levels within the Company are based.

Currently the design, with the help of the latest generation software, allows to develop the most realistic simulations, ensuring customers can evaluate all the dimensional and functional aspects of a proposed solution.

Since its foundation, the main objective has been the cultivation of highly specialized skills that could meet and satisfy the specific needs of the customer.

The new marketing trends increasingly involve the use of various

packaging formats, therefore a strongpoint of GPI Group are the personalized solutions, accompanied by particular attention in testing and a prompt after-sales service.

The evolution in packaging design furthermore requires continuous study to be able to safely and securely handle the most varied types of products, in this sense the cartoning and palletizing of innovative boxes (custom cases, tray/lid, wraparound) is the specialty of the GPI Group.





GEO PROJECT INDUSTRIES S.R.L.

Via Leonardo da Vinci, 43 - 35015 Galliera Veneta (PD) ITALIA Tel. +39 049 9475211 sales@gpindustries.eu











Photo above: Wrap-around; and photo below: Palettizzatore cartesiano - Cartesian palletizer



The many years of experience of the designers, combined with the know-how acquired in dealing with the most varied packaging solutions, have ensured GPI Group can propose innovative and high-performance machines that combine gentle handling of the product with high speed.

Particular attention is also dedicated to territorial marketing and communication. The dialogue between area managers and worldwide agents is continuous and collaborative, not only in relation to sales and assistance but also to marketing, in order to meet local needs in terms of communication support.

www.gpindustries.eu/it/

The product range includes Forming machines, Side loading Cartoning Units, Cartoning machines, Closing Units, All in One Units, Traditional and Robotic Palletizers, in addition to the other equipment needed for integrated lines.







ZACMI SEAMING TECHNOLOGY

OFFERS AGILITY, FLEXIBILITY AND HYGIENIC OPERATION FOR THE MOST DEMANDING SEAMING APPLICATIONS.





MULTI-HEAD SEAMERS DELIVER MULTI-FORMAT

ZACMI seaming technology offers agility, flexibility and hygienic operation for the most demanding seaming applications

ACMI's multi-head seamers underwent a significant design evolution in 2019 and now represent the benchmark for can-seaming technology.

With over 350 units installed around the globe – backed by 35 years of market, product and process experience – the multi-head seamers can seam any type of rigid round can, and can do so quickly, effectively, efficiently and hygienically.

With agility at the forefront of operational demands of many plants, the machines can be installed standalone or mechanically/electronically synchronised with any kind of Filler. Offering fully automatic height adjustment, they are flexible enough to handle tin plate, aluminium, cardboard or plastic containers, applying a range of lid formats including open top, easy open and easy peel.

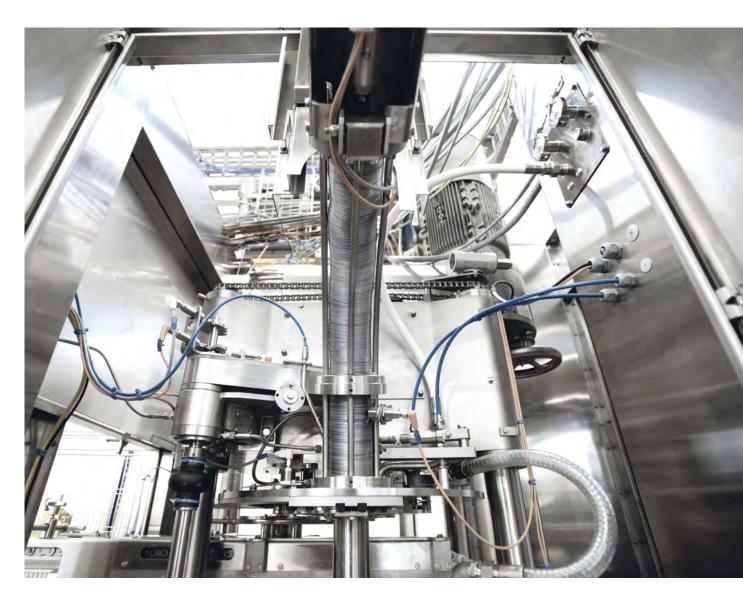
Their seaming system – controlled by a desmodromic cam – is available in 3, 4, 6, 8, 10 or 12 multi-head configurations, delivering a maximum output of 1600 cans per minute.

Fabricated from AISI 304 stainless steel, their strong structure removes all vibration, while also supporting a fully washable design, with an automatic base washing during production; a wash-in-place system, specially designed for beverage or difficult product applications; and the option for a CIP foaming cycle.









Sealed areas are also provided for the steam reduction group, the compressed-air reduction group, the electrical systems, the lubrication system and the CO2 feeding system (for carbonated beverages); all of which are easily accessible from cleaning and maintenance.

As an option, Zacmi also offers its D.S.M. for seamers technology. This Double Seam Monitoring solution checks the cans' seaming performance in real time using special sensors mounted on the second operation cam. These record the force signal measurements and can detecting – in real time – any potential out-of-range seaming operations, or can/lid defects, such as damaged flanges or foreign bodies between

the can body and the lid. The system offers data exporting, collection and result reproduction – even remotely – and the option for analysis by ZAC-MI technicians.

As well as detecting defects, by measuring the real force exerted on each seaming head, the D.S.M. technology can also be used for machine settings-regulation, ultimately helping to extend the service life of chucks and rolls.

Other innovations include: a centralised closed-circuit automatic oil lubrication system; a water/oil separation system, to prevent rusting and oxidisation; an advanced lid feeding featuring lid guides with replaceable wear plates for quick and sim-

ple low-cost maintenance; corrosion resistant plastic drive chains; and a rapid seaming-pressure-regulation system, which removes the need to disassemble the plate form the outside.

The company's multi-head seaming technology is also available on a vacuum variant, both of which form part of the company's extensive portfolio of food packaging and processing technologies, which also includes piston, vacuum, telescopic and monobloc fillers and pasteurising technology. And with innovation at the forefront of the company's activities, you can be sure that new and improved technology is never far away with Zacmi.

www.zacmi.com



LABELX®: THE TOP OF THE RANGE FOR AUTOMATIC LABELING MACHINES PRODUCED BY LABELPACK®

he automatic labeling machines by the LABELX® collection are a reliable and high-performance solution for:

- integration of flow-pack packaging lines.
- vertical bagging machines.
- · cartoning machines.
- vacume packaging/ clear film machines.
- product packaging lines.
- ... and more.

LABELX® ES is the principal model of the collection, is available in three different widths starting at 140 mm, then 250 mm and 350 mm, and offers a wide range of accessories that facilitate integration into any automatic packaging line. The advanced electronic management available for each model, ensures high speed and an optimal level of application precision.

All operating parameters are easily managed via a colored touch screen operator panel.

Integrated with a thermal transfer printing unit, LABELX® becomes a sophisticated printing and applying system capable of applying labels to single packs or bundles with exceptional productivity and many optional features, including:

- unhindered performance on the production line.
- control of proper application of each label.
- ability to check legibility of each label
- barcode compliance.









The LABELX® collection also has the following models:

LABELX® RM, with double motorization: this model is equipped with a reel holder that has a diameter of 400 mm., useful for managing nor-

mal autonomy operations and capable of reaching application speeds of $80\ m\ /\ min.$

LABELX® JR, a model that is suitable for medium and low productivity applications and can be equipped with



thermal transfer printing modules for variable data and barcode printing.

LABELX® and LABELX® JR two key labeling systems, specifically designed by LABELPACK® for the food sector: COMPACT, the entry level series of automatic labeling system: available in 8 standard models, this system offers countless customizable solutions while the LABELX® JR series labeler is capable of applying labels with heights up to 140/250 mm.

MODULAR, the top-level series of automatic labeling systems: suitable for meeting high production requirements, it is equipped with all the features required to satisfy integration into processes relating to industry 4.0.

Visit: www.labelpack.it







ALTECH SOLUTIONS FOR THE LABELING OF FOOD TRAYS

he ALTECH labelling systems of the ALbelt series provide high reliability, solid mechanics and excellent value for money in performance terms.

The high degree of customisation makes it possible to use the ALbelt systems to label a wide range of products. They are suitable for wraparound labelling of cylindrical products as well as side, top/bottom or C labelling of rectangular or flat products.

In its typical configuration, BT52, the ALbelt system can apply labels to the top and bottom of tubs, trays and packages, which are very common in the food sector. In the BT52 configuration, the system includes a conveyor transport system formed of two sections, a top and a bottom labelling head (to be chosen from the ALstep or ALritma models) with the label dispenser blade installed in the space between the two sections and, if necessary, a double motorised belt which keeps the product stable during labelling.





The labelling heads can be equipped with a printing kit for variable data, such as batch codes, sell-by dates, bar codes or other information that must be added to the label.

The ALbelt can be equipped with PLC and a 7-inch colour touchscreen panel to centrally manage all the system parameters, thus making the format change operations extremely easy and user-friendly and ensuring the compliance of the machine with Industry 4.0 requirements.

Besides applying one or more labels on several parts of a product, the ALbelt system can take up special configurations for more complex applications - such as placing a label onto another label, applying labels on three sides (c-wrap) - or non-stop configurations with double labelling heads, providing a continuous running solution.

FUNCTIONAL AND CUSTOMISABLE LABELLING MACHINES FOR FOOD PRODUCTS

ALTECH presents its innovative technology for C-wrap labelling of food trays.

To identify the product and guarantee its integrity - C WRAP LA-BELLING

In the food sector, labelling is a crucial element of the whole production process, as it allows to decorate the product to be consumed while providing all the essential information, such as contents, sell-by date, origin, nutritional values and any other details which might be required.

In order to meet the labelling needs of this industry, ALTECH has developed a line of labelling systems which is particularly suitable for products such as tubs and trays.

This line is called ALbelt and includes a range of extremely functional and customisable labellers, which can label a wide range of products.

A high-demand configuration is the one that was developed for C-wrap labelling of thermoformed or clam-shell food trays.

In this application the folder is adapted on three sides of the product - front, top and bottom - with a twofold function: to identify the product and to guarantee its integrity, like a tamper-proof seal.

In order to perform this operation, the ALbelt system includes a conveyor transport system formed of two sections, a top labelling head (ALritma) fitted with a marker for printing variable data such as sell-by dates, promotional labels and barcodes and an adapter especially designed for this





kind of labelling which is installed in the space between the two sections of the conveyor.

The system also includes a dual-belt spacer and a stabiliser with lateral mini belts that hold the product during labelling.

All labelling parameters are managed through a 7-inch colour touchscreen panel providing excellent legibility and user friendliness. In this configuration, an ALbelt system can reach a labelling speed of 60 pieces per minute.

Besides applying one or more labels on multiple parts of a product, the ALbelt system can take up special configurations for different applications - such top and bottom labelling - as well as non-stop configurations, providing a continuous running solution.

NON-STOP LABELLING AND IN-DUSTRY 4.0 - A MIX OF PERFOR-MANCE AND TECHNOLOGY FROM ALTECH

The ALTECH labelling systems of the ALbelt series provide an excellent price/performance ratio, without any compromise concerning reliability and robustness. The ALbelt systems come in numerous configurations based on specific labelling needs and can label different types of products, such as bottles, cans, jars, tubs, boxes, and trays.

The ALbelt systems are fitted with ALstep or ALritma labelling heads and can be equipped with printers to customise labels with variable data, as well as with product spacers, wrapping units for cylindrical products, adapters and bending units for corner labels.

If necessary, the ALbelt systems can take on specific configurations to meet particular needs, such as top and bottom labelling or non-stop configurations. ALTECH has recently supplied a system featuring both capabilities to an important producer of cold cuts in Italy. The system is fitted with two ALritma labelling heads, which are positioned in such a way as to apply a label on the bottom of trays. The operational logic allows it to detect the end of labels on the first head and automatically activate the second one, thus making it possible to change labels without stopping the labelling process. A third labelling head on the top is set up to apply a "hook" label to hang the tray on a display rack.

All functions and parameters are managed via a PLC system featuring a 7-inch colour touchscreen panel that can store and manage up to 100 labelling formats. The system can be interfaced via Ethernet, which enables remote access to monitor its health and status, e.g. for remote assistance. Moreover, the OPC-UA protocol makes the machine compliant with Industry 4.0 requirements.

ALTECH SrI is a leading Italian company specialised in the production of material coding, identification, and labelling systems.

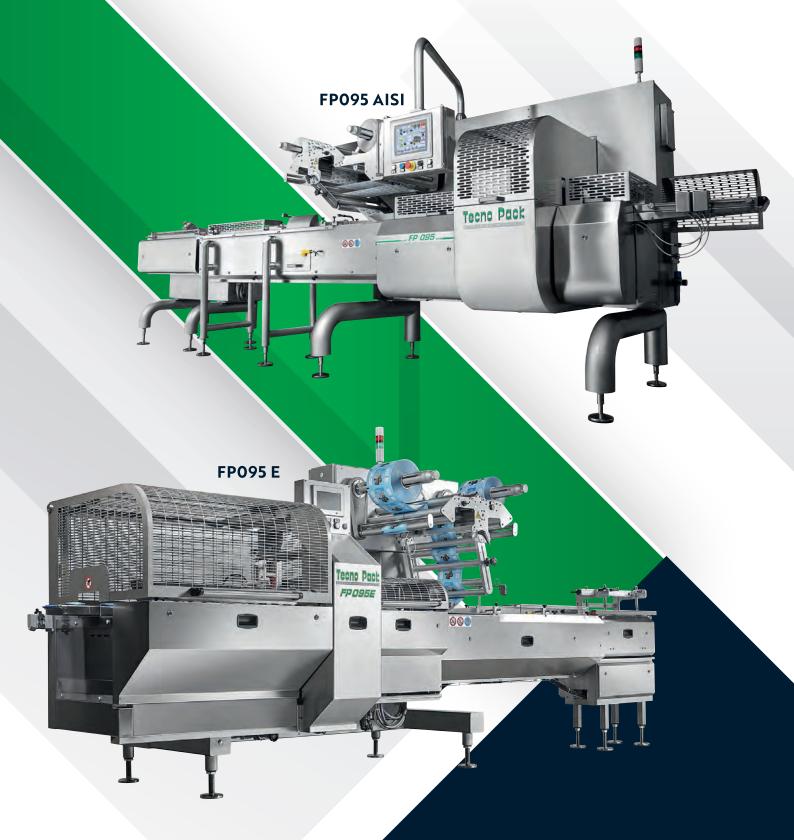
For further information:

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Tecno Pack

PACKAGING MACHINES

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WRAPPING UP QUALITY WITH TAILORED PACKAGING SOLUTIONS

olcezze Savini is a company based in Tuscany that for three generations has passionately been working in the art of bread and pastry making, using old processing techniques and carefully selected ingredients. From its factories in Valdarno, for over

fifty years Dolcezze Savini has been baking high-quality products such as the famous bread cooked in a wood-burning oven, made with Tuscan wheat.

In addition to the different varieties of bread and pizza made with differ-





ent types of flour, the Valdarno brand boasts a rich pastry production that also includes the typical traditional pastries from Siena produced by the historic company Fiore 1827, acquired by Dolcezze Savini in 2017. Among these specialities there are three important IGP products: two of them are from Siena and they are Panforte and Ricciarelli, while the almond biscuits named Cantuccini are linked to the Tuscan territory.

For a long time, Dolcezze Savini has focused its activity on a production that pays particular attention to the importance of some elements such as natural ingredients, reduced glu-

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











ten products, palm oil-free products and a clearer labelling system.

The current size of the company, which counts more than a hundred employees in total, has not affected the original characteristics of Dolcezze Savini, confirming its vocation for craftsmanship, its dedication to

quality and its desire to be at the forefront of the technology used in its factories.

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

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





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

For over 30 years Tecno Pack has been designing, manufacturing and distributing horizontal packaging machines and automatic packaging systems for the food industry and other sectors.

Tecno Pack is a group of companies including Tecno Pack, IFP and GSP. Based in Schio, in the province of Vicenza, Tecno Pack stands out for being a pioneer and innovator in the packaging industry, developing cutting-edge solutions, increasing the digitalization of machines and plants, offering its customers excellent results with limited investments. The partnership between Tecno Pack and Dolcezze Savini has resulted in the development of three packaging lines, specifically designed by

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

 Monopiega Diamond 650 wrapper. This is an innovative and







high-performance shrink wrapping machine, designed to wrap small, medium and large-sized items as well as thin solid products;

- Flow pack ATM FP 025 line suitable for pizza dough and ideal for "pinsa" (a traditional pizza made with an ancient Roman recipe). This horizontal packaging machine is specific for modified atmosphere packaging thanks to the tight packs granted by the sealing system. It is the most suitable flowwrapper when aesthetically goodlooking packages with high-quality side gussets and thick wrapping materials are required;
- The FP 015 line for sandwiches.

This horizontal pillow pack wrapper has a particular cantilevered frame with easy accessibility that helps sanitation, both for hygienic and maintenance reasons, guaranteeing full safety at work.

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

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

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



ENFLEX FOR THE LATIN AMERICAN MARKET: FLEXIBILITY AND RELIABILITY FOR THE FOOD INDUSTRY

nflex is a Volpak brand dedicated to the development of automated machines for pouch forming, filling, and packaging at medium and low speeds.

The company operates in the global market, offering customized systems based on the client's needs, while taking into consideration end consumer trends and individual countries' specificities. To the South American market, Enflex offers a portfolio of solutions aimed at the food indus-

try that are centered around flexibility and production efficiency.

CURRENT AND FUTURE MARKETS

Many customers are currently using Enflex solutions in the South American market, including Gourmet, a Chilean brand working in the Food industry and offering a wide variety of products ranging from dehydrated soups and creams, pastry products, to condiments, spices and liquid items such as soy sauce and other emulsions.

More specifically, the Enflex technology is used by Gourmet for the packaging of condiments, soups, and confetti in three different pouch formats, capable of integrating a "zipper" type closing/opening system. The flexibility of the solutions employed by the Chilean company is such that it allows them to package more than 40 different types of products on the same machine, while following the highest standards in terms of safety, hygiene, and reliability.

The company currently employs sev-



THE EVOLUTION NEVER STOPS





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eral Enflex units, including two F-14, one D-26 and three F-17.

"The Enflex systems boast an extremely high production efficiency: we need to regularly change the products we're packaging and Enflex machines have an OEE that is about 6% higher than other solutions. The product/format change over time is really minimal," Sebastian Neumann Saavedra, Vice-responsible of Engineering, Maintenance and HSE, says. "The machines are also easy to use, as they are very stable: after an adequate setup time at the beginning of each shift, the dosing system is extremely precise and steady, and requires minimal adjustment during production, if at all."

MAXIMUM RELIABILITY AND SUSTAINABILITY

Enflex machines have an established reputation in terms of technology, durability, and product quality, while also boasting high levels of flexibility and ease of use.

The solutions developed by the Spanish brand also prioritize sustainability, since they are extremely energy efficient. In addition to this thanks to the research made in Volpak's PouchLab laboratory, in the last few months Enflex machines have seen a further evolution and can now employ mono-materials such as PE and PP films.

However, one of the most valued characteristics in the South American

market is still reliability, especially in the consumer goods industry. Enflex strongly believes in the quality of its solutions and, from 2021, the company offers an extended warranty on all "F series" machines, which are now completely covered for 3 years.

Moreover, all the machines are equipped with a remote support system that – through a simple Internet connection – allows Volpak's specialized technicians to remotely service the machine, a feature that has proved extremely valuable during the Covid-19 pandemic.

Visit: www.volpak.com







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A NEW MANUFACTURING FACILITY IN SARDINIA FOR PAN AMERICAN PACKAGING ITALIA



new development for Pan American Packaging Italia. As part of the company's process of expansion, which is permeating European markets with special products in the field of stretch wrap and packaging in general, Sardinia now transforms from an ambitious project to a concrete reality.

Furthermore, the selected industrial area of Macchiareddu, just outside of Cagliari, demonstrates a particular focus on the region, acknowledged with great satisfaction by the Regional Authorities, with the intent of contributing to the local recovery by relocating workers from the rubber/plastic industry who have been negatively impacted in the recent past by the offshoring of multinational corporations.

The industrial block extends across an area of approximately 82 km², of which approximately 37 are occupied by manufacturing activities controlled by more than 130 companies. An excellent context within which to initiate commercial collaborations, given the cross-sector consumption of packaging products.

Antonello Morello, sole administrator, explains the group's strategy, which identified the Sardinia Region as a valid partner and strategic location for serving central-southern Italy and introducing itself to the emerging markets of Northern Africa. He also explains how the Sardinia Region alone, which currently has no local manufacturing companies in this



specific sector, has a need for packaging wrap that absorbs most of the production from Pan American Packaging Italia's new facilities.

By moving its headquarters from the centre of Milan to Cagliari, while keeping its current manufacturing sites working at full capacity, the company has, with determination and enthusiasm, demonstrated its commitment to the southern expansion project.

In July, Pan American Packaging will move into the new warehouses, which have already been set up to accommodate the extruders and re-

winders that will be powered by solar energy by the local Sardinia Green Island consortium.

In addition to standard wraps the following will also be manufactured on-site: Eagle Force Stretch ribbed technical wrap, manufactured with a patented process that produces thick longitudinal bands, making the wrap exceptionally resistant to tearing and giving it an outstanding containment capacity, characteristics that make it particularly well-suited to the packaging of irregularly shaped products; Eagle Air Stretch macro-perforated ribbed wrap, specific to food companies, which meets the most various



ventilation requirements; sterilised wraps like the revolutionary Steril Stretch which drastically reduces bacterial and viral load, thus preserving products and people's health and adhering to increasingly stringent hygienic practices; Fire Shield Stretch flame retardant wrap, which is very useful in large warehouses for reducing the risk of fire and keeping the merchandise, structure, and personnel safe; Antirust Stretch wrap, also delivered in practical mini-rolls, to wrap and preserve metal profiles that are subject to oxidation; Fresh Fruit Stretch ethylene absorber, to make fruit ripen slower; and Green Leaf Stretch, a wrap featuring time-controlled decomposition for clients who wish to help reduce pollution caused by plastics accidentally littered in the environment.

Pan American Packaging Corp. has always focused on research, working hard to find innovative solutions aimed at producing avant-garde products with a conscientious and respectful use of plastic and providing high level services to its clients. The company continues to invest in research and, at its laboratories in Switzerland, certifications and other new developments are currently underway which will soon be presented

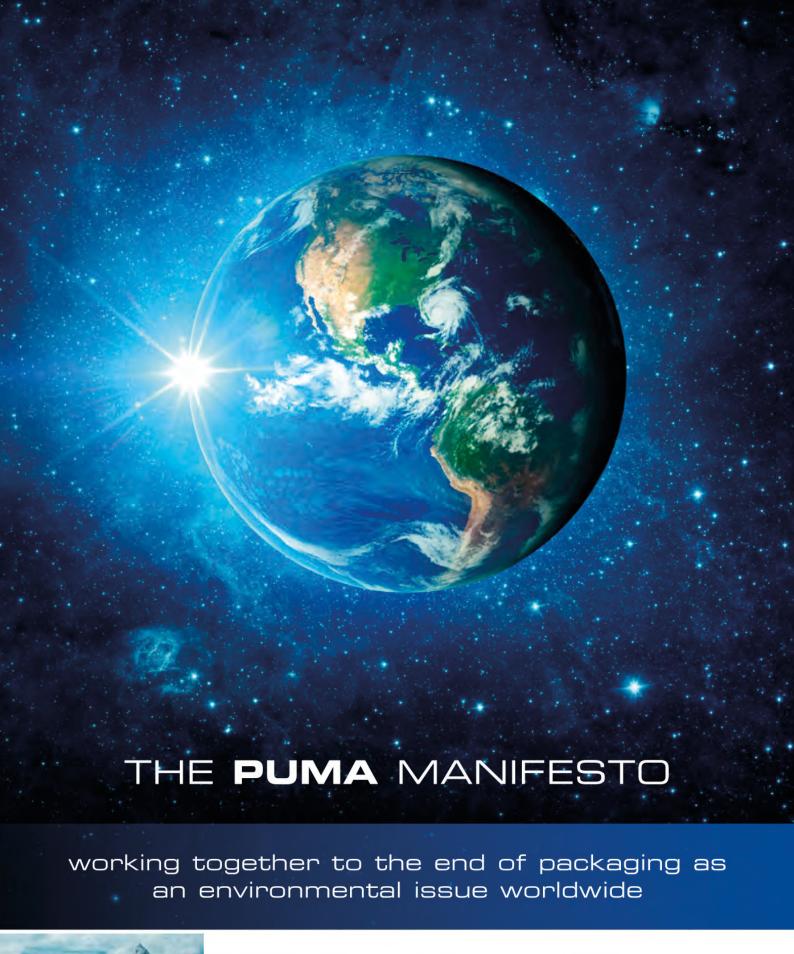
on the market. Thanks to this approach, the company was not caught off guard by the new challenges presented by this unique historic and economic moment, but rather got to work to create added value for its clients. It's because of these aspects

that the company is considered one of the most reliable and efficient players on the market in terms of service and post-sales.

Visit the website: panamericanpackaging.com













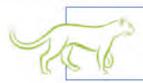
THE **PUMA** MANIFESTO

WHAT IS PUMA?

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

WHAT IS PACKAGING?

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



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

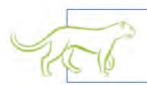


WHAT IS NVC?

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

WHEN IS PACKAGING AN ENVIRONMENTAL ISSUE?

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



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

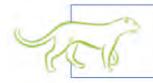


WHY DO WE HAVE TO ACT NOW?

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

ABOUT THE MANIFESTO

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



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



THE **PUMA** MODEL

THE VOCABULARY

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



Holistic innovation is needed as we are all interconnected in packaging



ADDRESSING THE ENVIRONMENTAL ISSUES

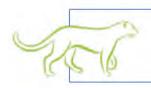
Environmental issues may come and go, depending on the many different interactions between our human activity and planet earth. Whereas the PUMA model remains unchanged, its application to environmental issues may vary in the course of time. In this first edition of the PUMA Manifesto we focus on litter, CO_2 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.



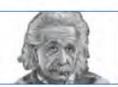
	FE	P-U-E	C-C	BE
Litter			1	
CO ₂	/			1
Product Packaging material + Total environmental impact				
Future issues	1	1	1	1

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 faciliate 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



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NEW SUCCESS FOR AKOMAG





Lavabottiglie "double-end" A OMAG



ecently the company delivered, installed and tested a new machine intended for washing recycled glass bottles. The machine for the PepsiCo group is a Hydra 8.2, characterised by a very high production: 37,500 bottles/h.

The new model, the pride of mechanical Made in Italy, reaches a mechanical efficiency equal to 99.4%, successfully exceeding the standards required by the customer in the contractual phase. With this new provision,

Akomag confirms itself once again as world leader in the construction of glass bottle washers. The bottle washer has been specially designed in order to minimise the environmental impact, with particular attention to water and steam consumptions, and to the duration of the detergent bath. The completely automated wash cycle includes an initial bottle-emptying station followed by a pre-wash spraying and first pre-soak bath that significantly reduces detergent bath pollution and markedly decreases consumption levels.

In the pre-soak area the project also provides for the installation of a belt filter that allows to automatically remove the main impurities typical of recycled bottles (straws, paper, cigarette butts, for instance). The washing of bottles is completed with the internal and external high-pressure detergent wash sprays, using selfcleaning and self-centring rotating nozzles.

Mains water for spray-rinsing

In designing Hydra 8.2, Akomag has

focused on the final rinsing sprays using mains water.

The expedients developed during the design stage have allowed to achieve extraordinary results. By installing a special valve with integrated flow meter on the mains pipe (controlled directly by the control panel), it is possible to detect the instantaneous and daily water consumption required for the proper washing of the bottles. With pride and satisfaction,

Akomag technicians declare that thanks to the new design the new machine has a water consumption equal to 0.098 litres per bottle. A lower value than rigidly imposed in contractual phase by the customer.

The supply is completed with many other technological innovations, in-





cluding sensors for slowing down or stopping the machine in case of missing or clogging of the bottles on the conveyor belts; synchronization systems of the bottle washer speed with that of the filling monobloc; control and introduction of detergent and additives in the washing bath and of sequestrants/ disinfectants in the spray tanks; self-cleaning filters in the tanks; automatic bottle loading and unloading, perfectly synchronized with the movement of the main chain.

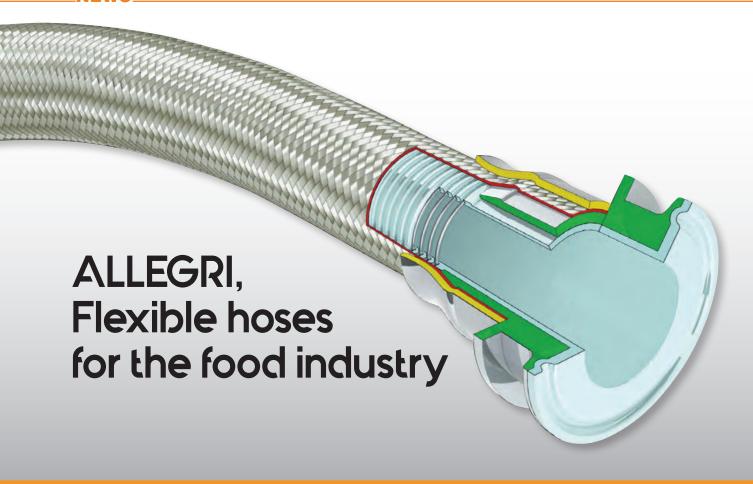
Akomag is a flexible and dynamic company that bases its policy on customer satisfaction, the quality of its systems, its assistance services and technological innovation.

Akomag has been working for several years in the bottling sector and thanks to the proven experience developed in this field, the company can guarantee to its customers maximum yields, user-friendly operation and minimum operational costs, as well as long working life of its machines built with top quality materials.

From the province of Parma, Akomag aims to meet the needs of all those who are looking for high quality products.

www.akomag.com





W. PHARMA

PTFE liner hose smoothbore inside, convoluted outside white (GP) or black antistatic (AS), with 316 Stainless steel wire helically wound into convolutions.

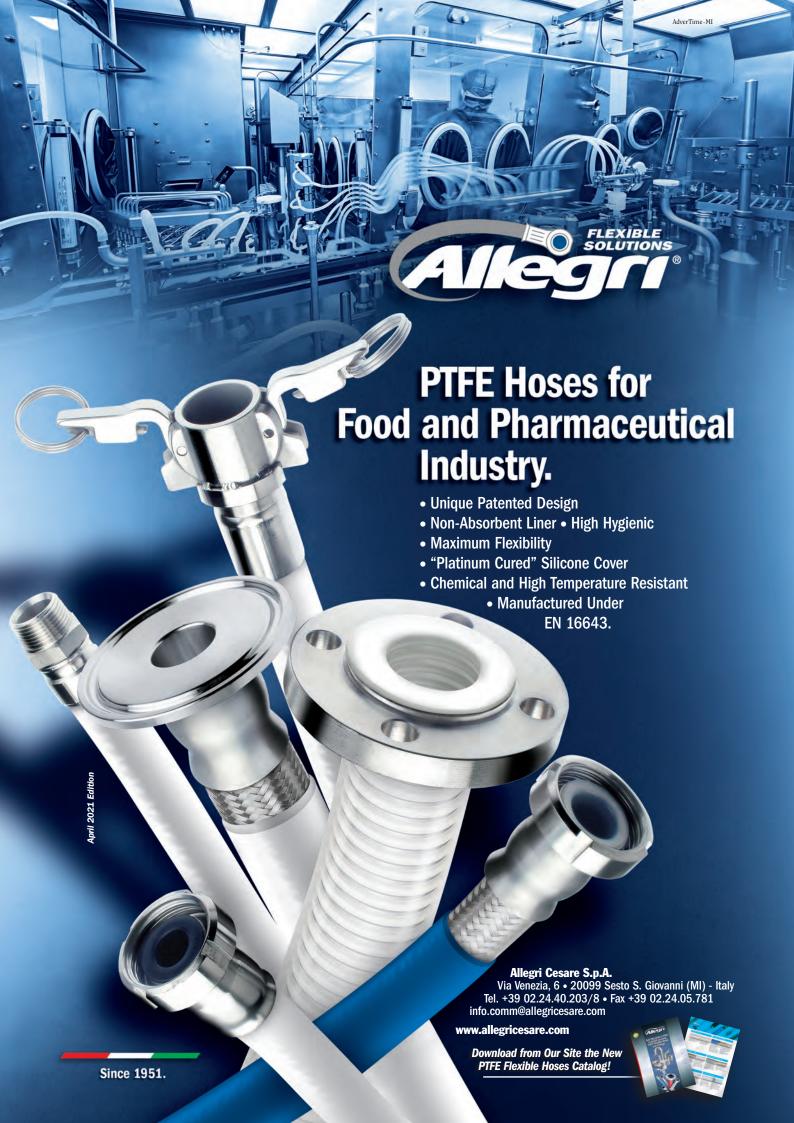
316 stainless steel braid covered with a white silicone rubber cover "Platinum Cured" marked in accordance with EN16643.

W. PHARMA hose is designed for use in high purity Pharmaceutical, Biotech, Chemical and Foodstuffs, where easy of cleaning the hose is required, both internally and externally.

The same is also versatile for other types of industrial applications, in particular where they have passages of fluids and gases at high temperatures. Hose conforms to FDA norm.







W. PHARMA T

PTFE liner hose smoothbore inside, convoluted outside white (GP) or black antistatic (AS), with 316 Stainless steel wire helically wound into convolutions, with a clear silicone rubber cover "Platinum Cured" marked in accordance with EN16643.

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

W. PHARMA T is designed for light duty applications, with low internal fluid or gas pressure.

It is designed for use high purity Pharmaceutical, Biotech, Chemical and Foodstuffs application areas, where ease of cleaning the hose is required, both internal and external. It is also very suitable for use in other general applications, particularly those where hot fluids or gases are being passed. Hose conforms to FDA norm.



SWIVEL FEMALES







CAM LOCK FITTINGS



FIXED MALES



TRICLOVER FITTINGS



SPECIAL FITTINGS









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3D SCANNER for bottling industry

.to 3D model

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Software for automatic design of SCREWS & STARS



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EQUIPMENT FORTHE **BEVERAGE INDUSTRY**



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

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

WS' products for beverage industry are:

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



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

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

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

Between main technical references, WS can list the supply of two fruit juice tubular flash pasteurizers for aseptic

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

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FLUIDS HANDLING

CLEANING AND RINSING

HOMOGENIZING

TURNKFY PROJECTS







A GLANCE INTO THE INNOVATIVE COOPERATION INDUSTRIAL AUCTIONS



ince Industrial Auctions has passed its 10 years of existence, things have changed all around! Where they began with only a total of three employees, they have now grown up to a staff crew of 25.

This did cause certain changes, both internally and externally. However, Industrial Auctions' main priority is ensuring their core values; transparency, a personal approach, and optimal service. Within this article, an insight will be given into what remained the same and what has changed tremendously.

"When a company wants to grow, it is well-known that it's prior to adjusting certain topics to the industry and market they operate in. Namely, the dynamic of an industry or market forms the construction of which services are desired by your target group!

In order to fulfil these wishes and thereby satisfy your target group, it is key to match your services as good as possible. In its ten years of existence, Industrial Auctions is always working on helping its clients as good as possible."

CEO Ad van Kollenburg

Flat organisation structure

When facing sever growth, it is assumable that this comes in line with some formalities. However, the team of Industrial Auctions have always prioritized the short communication lines and informality among the staff and towards its relations. The young team works closely together and their communication forms a clear and efficient basis. Despite the growth the company faces, this communication remained as good as unchanged.

With the numerous relationships Industrial Auctions has maintained over time, many clients would ad-





dress this approach as pleasant and efficient. Ever since the company has started, the globalization has obviously contributed to an efficient way of communication as well.

Extended customer base

Talking about these clients, a whole new customer base has joined the online platform since its existence. Every day, new clients create an account at the website.

These new members are highly appreciated and supported where possible by the staff of Industrial Auctions. Some relations with clients are closer than others.

This is mostly depending on the frequency of their purchases and thereby moments of contact. However, the staff members try their best to realize close contact and help all clients where needed in the same manor.

Internal improvements

Obviously, a company cannot grow without internal adjustments. Therefore, specific internal improvements took place in order to meet up with the company's great growth. After a couple years the company was raised, Industrial Auctions moved to a new office.

This office is located at a very efficient location near to the highway and airport. Recently, a new logistic hall is added to this location as well. Because of this combination, the business activities can be fulfilled perfectly.

As mentioned earlier, this new office definitely came in line with the arrival of new employees.

Besides a new headquarter and new colleagues, the expressions of Industrial Auctions changed as well.

The website of Industrial Auctions is obviously the biggest trademark of the company and continuously asks for updates! The layout has remained clear and





Professionals in online auctions for the food and beverage industry

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



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



Online auction machinery for the food industry on behalf of Windsor Food Machinery Ltd in Ashford (UK)



Online auction poultry slaughter lines and machinery on behalf of USE Poultry Tech in Hillegom (NL)



Online auction industrial cooling and freezing equipment in Oost-, West- en Middelbeers (NL)



Register for free

Find and bid

Win

Pay and pick up



efficient - which stands in line with the company's mentality - but did face continuous renewing including new features.

The marketing team likes to think ahead and continuously works at innovative ideas. Some examples of other internal improvements are; a new layout of the brochure, an upcoming personal work space once logged into the website, more company cars, a new design at the truck tarp, and more options to sell your machinery at one of the companies auctions.



Business operations

These tangible improvements are surely being supported by operational activities. Because of digitalization and globalization, contact with media partners became more accessible. This way, Industrial Auctions is advertising with many more media partners and thereby through more marketing channels. The online marketing has increased a lot as well and this created new opportunities.

The employees of Industrial Auctions became more skilled than in the beginning as well.

This is mainly due to the increase in experience and knowledge about the food and beverage industry, and improvement in speaking foreign languages.

This article has mentioned the most important topics in which Industrial Auctions remained the same and what changed enormously. When thinking this means settlement for now, think again! The staff is continuously occupied with growing as a whole and individually. The future looks bright for Industrial Auctions and many good things are yet to

HENKOVA come.

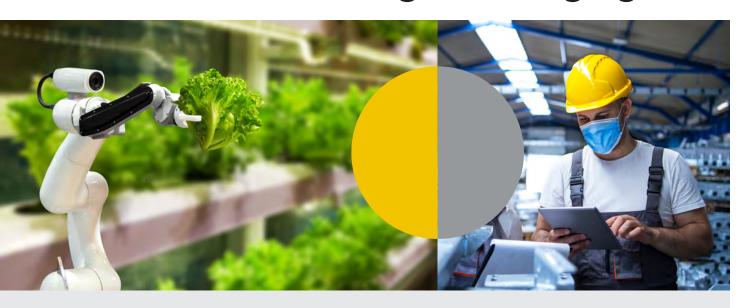


www.Industrial-Auctions.com

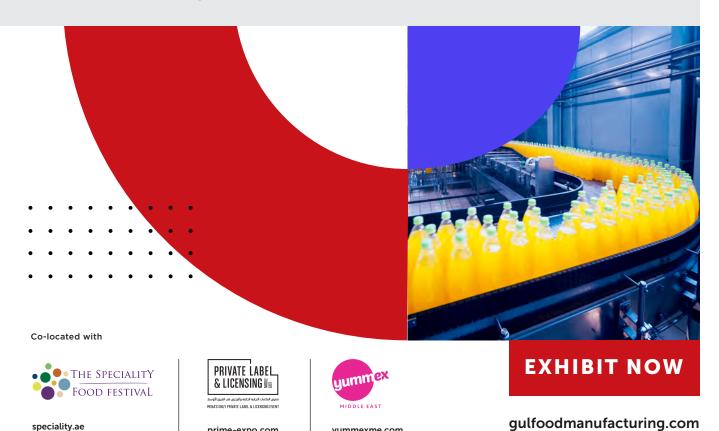




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FARA® FUNCTIONAL SYSTEMS FOR PLANT-BASED NUTRITION: FARABURGER!

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

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

The blends include emulsifiers, natural hydrocolloids and functional ingredients that give foods and beverages unique characteristics, for example a well-defined structure, good resist-

ance to thermal stress, improved consistency, or a characteristic and consistent taste.

The added value is not limited to improving product quality. Functional Systems, in fact, simplify the phases of research and development, quality control and approval of raw materials, with important economic, practical and operational advantages.

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

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

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

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

FARAMIX HH 105 for meat-nomeat burger

FARAMIX HH105 is a functional sys-





tem to obtain a "meat-no-meat" product (hamburgers, meatballs, sausages) with visual characteristics and compactness identical to classic ones: meaty, juicy, pleasant to the palate. Within the plant-based diet, the "meat-no-meat" category is growing just as fast and responds to the new needs and sensitivities of a growing consumer segment.

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

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

CHARACTERISTICS OF THE FINAL PRODUCT WITH FARAMIX HH105

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

A product so juicy and meaty, people won't believe it's made from plants! A food that is not only good and high in protein, but also an ally of environmental sustainability.

A certified quality production plant

First-class expertise in the selection of raw materials available on the market, special attention to food safety issues and a state-of-the-art production plant are the prerequisites to be the reliable partner in the production of powder blends. Faravelli's production plant is located in Nerviano, near Milan. It houses a packaging line for customisable solutions and an application laboratory where finished products are tested with methods that closely reflect the final application.

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

www.faravelligroup.com/functional fara@faravelli.it





CIBUS TEC DOUBLES UP, WITH A NEW FORUM IN OCTOBER 2022 AND THE TRADE FAIR IN 2023

AND INTRODUCES A NEW ARRIVAL: "CIBUS TEC LAB"

ibus Tec – the event organised by Fiere di Parma and Koelnmesse dedicated to the food and beverage technologies sector – presents a brand-new project: "Cibus Tec Forum", the first edition of which will be staged in Parma (Italy) on 25 and 26 October 2022.

The trade fair Cibus Tec (whose reputation in the sector of food and beverage technologies precedes it) will instead be held on October, 24-27, 2023. A postponement by 12 months made necessary by a disharmonious fair calendar which, amongst other events, has already seen Koelnmesse's sister trade fair schedule "Anuga FoodTec" on 26 till 29 April 2022.

Antonio Cellie and Thomas Rosolia - respectively CEO and Chairman of Koeln Parma Exhibitions, the operative arm of Cibus Tec - are in no doubt about the new strategy: "Our main objective has always been to give exhibitors in the sectors involved in our exhibition everything they need, as concrete business opportunities in a harmonized food technology trade fair calendar. Hence our decision to postpone Cibus Tec by twelve months. It is now conveniently programmed to take place in 2023, and we will be resuming our usual three-yearly agenda from 2025 onwards".

Anuga FoodTec will accordingly be the first major international "post Covid" food technology trade fair. An event which will also see the support of partner exhibition Cibus Tec,

Thomas Rosolia and Antonio Cellie: "A change in schedule made necessary to harmonize the 2022-2023 food technology trade fair calendar"



Antonio Cellie



Thomas Rosolia



ensuring the solutions of the "tech" firms in its community are showcased whilst fostering attendance of Italian and international visitors alike.

The Koelnmesse event in Cologne will allow the very latest, most refined home-grown Italian technologies to receive high visibility, whilst affording all the business opportunities which the international visitors of Anuga FoodTec guarantee.

In 2016 Fiere di Parma and Koelnmesse agreed in a partnership, thanks to which both fairs and organisations have pooled their communities and networks of relations, numbering somewhere in the region of 11 thousand businesses.

CIBUS TEC FORUM

In 2022, Cibus Tec will be showcasing its expertise and business-generating capacities, offering various sectors of the food industry an opportunity for discussion at national level: Koeln Parma Exhibitions - the joint venture resulting from the partnership between Cologne and Parma's trade fair organisations - has in fact decided to hold Cibus Tec Forum in Parma on 25 and 26 October 2022. The two-day event will see meetings, talks and analysis, confirming the pivotal nature of topics such as food safety, innovative materials and the circular economy, digitalization, supply chains and sustainability.

In short, a think-tank which, in around twenty talks and conferences, will see professionals and experts of international stature tackle topics linked to research, the economy, the needs of enterprise, and how to develop new networking and business opportunities.

The format - which, amongst other things, will also feature compact turn-key booths - will be divided into five main thematic areas (technologies and solutions for meat, for





dairy products, fruit-vegetables-liquid foods, cereals-ready meals and packaging) and four arenas where the focal points of the forum will be discussed.

CIBUS TEC LAB

Cibus Tec Forum 2022 and Cibus Tec 2023 will also see the addition of Cibus Tec Lab, the new educational project set to take the form of a series of webinars which will accompany the food and technology industry up to the 2023 event.

Alongside this "road map", efforts to enhance the penetration of Italianmade products in international markets will see Fiere di Parma taking part in Expo Dubai 2020 with "M-Eating Italy".

The initiative will offer visitors a genuine "Italian food experience", as well as business-matching initiatives dedicated to Italian food&beverage solutions and technology firms. "M-Eating Italy" will take place over the duration of the universal exhibition from 1st October 2021 to 31st March 2022, and will be staged close to the Italy Pavilion near the new Dubai Exhibition Centre.

All issues which will also be explored in the German Pavilion CAMPUS GERMANY at Expo Dubai, which Koelnmesse is organising and staging on behalf of the federal government. me

Koelnmesse - Global Competence in Food and FoodTec

leader in organising food fairs and events regarding food and beverage processing. Trade fairs such Tec are established world leaders. food and food technology trade fairs in Cologne, Germany, but also in further growth markets around the globe, for example, in Brazil, China, Colombia, India, Italy, Japan, Thailand and the United Arab Emirates, which have different focuses and contents. These global activities enwork of events, which in turn grant access to different markets and thus create a basis for sustainable and stable international business. Further Information is available at: www.anugafoodtec.com/trade-

fair/industry-sectors/

Fiere di Parma

A four hundred thousand sqm exthe productive districts of Northern and Central Italy: this is the identity card of Fiere di Parma. A business, within the Italian trade fairs organizers landscape, committed to partner with companies wishing to fulfill their expectations with solutions combining tradition and innovation. The fruitful marriage between trade has led to the establishment of leading events such as Cibus, which has long supported and promoted Made in Italy food sector across the world; Cibus Tec, a privileged showcase for food processing and packaging machinery; Mercanteinfiera and Gotha, the prodigious intuitions that over the years have succeeded to give dignity back to the antique sector as well as a professional dimension, setting trends, launching new lifestyles and inventing modern



TECNINOX, MACHINES FOR THE FOOD AND BEVERAGE INDUSTRY

ecninox has been building machines for the food and beverage industry, as well as the pasteuriser for beer, and is willing to examine any customer's enquiry and request of supply.

Tecninox plants and pasteurisers for beer are built according to the latest manufacturing technologies and are used for the beer heating processing and the pasteurisation lines in full bottles or cans.

The strength of Tecninox is in heat treatment.

Tecninox builds single machines and complete lines.

The Tecninox machines are built entirely of stainless steel and are made to the customers' requirements. At the basis of the Tecninox work is the great production flexibility, combined with a high degree of professionalism in order to offer the most advanced technology in realising pasteurisers for beer.

Information: main production range:

Machines for food and beverage industry. Additional production range:

- machineries for tomato processing;
- machines for fruit processing;
- machines for jam processing;
- machine to process vegetables, mushrooms, vegetables with oil or vinegar pickle;
- pasteurisers for beer cooling tunnels for any type of container and product:
- pasteurisers tunnel coolers for beer and beverage;
- static sterilizers for any type of container and product;
- batch evaporators;
- cooking vessels;
- autoclaves; cutters;







macchine per l'industria alimentare

- cooker for snails and other food products, autoclaves, linear filling stations, linear filling stations by water rain, circular and volumetric fillers;
- electrical and gas roasters for vegetables;
- steamy and electrical concentration boule:
- oil immersion deep fryers;
- bratt pans. 🗎

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BRAKE MOTOR TECHNOLOGY



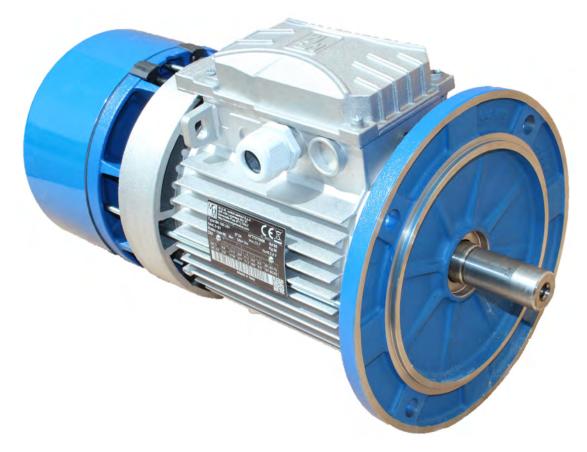
One step stop ahead



Motori Elettrici S.p.A.

THE QUALITY THAT PRODUCES QUALITY

MGM MOTORI ELETTRICI: LEADER IN BRAKE MOTOR TECHNOLOGY



GM Motori Elettrici is the leader in brake motor technology, manufactured in Italy and consolidating its reputation and presence in the market for over 70 years in Europe and in the World.

MGM Motori Elettrici's facilities in Italy include the main production plant in Serravalle Pistoiese (Pistoia) and a warehouse with commercial offices in Assago (Milan). Further plants in Montreal (Canada), Detroit (USA), Chennai (India) and Izmir (Turkey) complete a global presence further enhanced by a network of distributors for sales and assistance in more than 70 countries.

The success of our AC brake motors is owed to the ingenuity of an innovative design created in our laboratories.

With great ambition, three years ago we set out to further upgrade our brake motors.

The first step was to discuss and receive feedback from consultations with over 100 technical departments at our customer sites around the world. With focus on the features and improvements they would like to find in their ideal brake motor.

Our goals were not only to meet the recommendations provided by our



customers but even to extend the life cycle of our motors, to increase the average energy efficiency and to give priority to the use of recyclable material with low environmental impact. Since 2008, the average amount of energy our products need to operate has steadily decreased. In addition, by rethinking and redesigning mate-



rials and the production process, we have reduced the energy needed for the manufacture of our brake motors with a significant reduction of the greenhouse gas emissions. We felt it appropriate to speed up this process.

All single-speed motors are already available with the level of energy efficiency in accordance with the new European regulation that has entered into force since July 1st 2021, the brake coils are undergoing improvements in terms of reducing energy consumption and increasing performance.

Motors with IEC frame sizes 100 and 112 will be the first to be presented in the market with most of the planned

upgrades. The dimensions compared to the current production will be reduced, the frame offers an optimal heat dissipation capacity and allows, thanks to two dedicated lifting eyes, greater ease of handling.

The terminal board has been made more accessible, simplifying the connection and reducing the installation time for the benefit of the end user. We then designed and realized, by patenting it, a new methodology that allows us to use rotors with larger active parts for the benefit of efficiency but without increasing the moment of inertia of the motor.

All this has allowed us to improve the dynamics and maintain the capacity

of a huge number of starts per hour. The remainder of the motor frame sizes will receive the same improvements during this year.

For MGM Motori Elettrici sustainable development and respect for the environment have always been very important goals.

In the Serravalle Pistoiese plant almost 100% of the electricity consumed is produced by the photovoltaic panels placed on the roof, the air conditioning is supported by a geothermal system and the consumption of drinking water has been reduced.

Visit: www.mgmrestop.com





THE CHOICE OF BEING UNIQUE: MINI MOTOR GOING ALL OUT WITH DBS

DBS is the line of uniquely designed brushless gear motors with built-in drive, made for ultra-high performance

n excellent machine is made of excellent components. Mini Motor knows this all too well and for 55 years it has been bringing to customers extremely efficient gear motors on the cutting edge of technology. The Reggio Emilia-based company has always chosen to design custom solutions for those complex and difficult applications where a standard product just won't do. This choice developed into excellence and today Mini Motor electric gear motors stand out for their compact size, speed, and resistance under any condition.

Up there with the top products we find the family of DBS brushless gear motors with built-in drive system where all the elements - motor, driver and reduction gear (where fitted) - are packaged in a single product of indisputable excellence. The 4096-PPR multi-turn absolute encoder offers maximum freedom in terms of speed and position adjustment, maintaining the distance even when the motor is off. The great innovation about DBS is the presence of an accelerometer that is able to detect gear motor vibrations. The accelerometer plus the other sensors that detect temperature, current and speed are able to identify anomalies within the sensors themselves or from the machine systems connected to them, implementing real predictive maintenance.

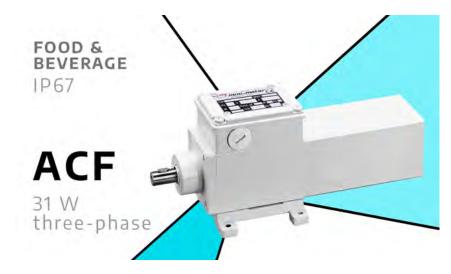
What's more, with DBS several mo-

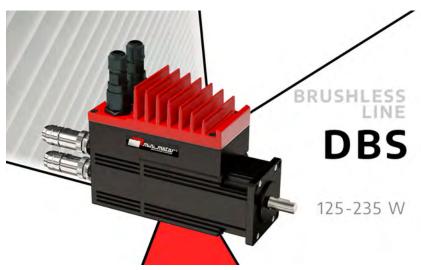
tors can be connected in a cascade system via the main communication protocols: EtherCAT, Ethernet/IP, Powerlink, Modbus, PROFINET I/O and CANOpen.

The wireless protocol was recently added to these 6 fieldbuses. Mini

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

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









DBS

Brushless servomotor with integrated drive





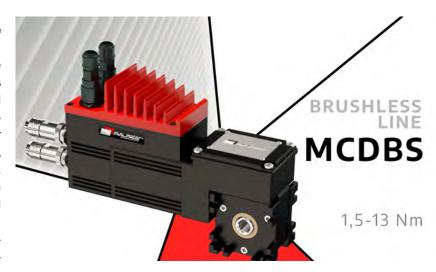
A character of steel the one of the Clean Series!

For demanding sectors like the food&beverage and pharmaceuticals industries, Mini Motor has designed also its SS series of motors that combine a small footprint with the superior specifications of Aisi 304 and Aisi 316L stainless steel: resistance to corrosion, compact surface, lack of porosity, high bacterial removal performance, and low bacterial retention.

It complies with IP69K protection rating and is ideal for aggressive environments or applications demanding high standards of hygiene.

About DR Series

The **DR series** represents the next step in classic single phase and three phase-motors. Complete with integrated drive, connectivity with the most common field buses, and a new design reducing the footprint and optimising the use of space, they represent the perfect integration of drive, motor and gear unit, lowering energy consumption. The great capacity for customisation and extremely high quality at competitive prices are guaranteed by each product. For all applications demanding an IP67-rated seal, Mini Motor has designed a digital concept drive capable of adjusting the speed of motors and gear motors using sensorless vectorial control: the DRF. It is built according to the guidelines issued by the European Hygienic Engineering & Design Group, which can be applied to ACF, MCF, PCF and PAF three-phase asynchronous motors up to 270 Watt. The technical features of the DRF are







ideal for use in the dairy, bakery, winemaking, fruit and vegetable processing, and oil sectors, as well as the Food industry in general. The Reggio Emiliabased company is the benchmark in the Food world not only for the quality of its products but also for its fast and dependable after-sales support service. Supported by an online ticketing system, a qualified team of mechanical and mechatronic engineers is ready to answer questions and provide assis-

Mini Motor wants customers to get service as excellent as the quality of its motors, an unshakable commitment that is at the heart of the company's philosophy.

www.minimotor.com

tance within 24 hours.





Eternal.
Strong.
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Explore the new website. www.satinox.com

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SATINOX STAINLESS STEEL BOWLS PERFECTLY WELDED FOR OVER 30 YEARS



atinox has been manufacturing perfectly welded stainless steel bowls for more than 30 years. They are made by hands to fit the machines used to knead and mix dough for the bakery and pastry sector as well as for the chemical and pharmaceutical sector.

The company was founded in 1982 and since that it has been a strong believer on the value of manual metalwork fabrication. All bowls are made by expert and specialized workers, able to manufacture robust, versatile

and long-lasting tailor-made products. Satinox can count on a team that works together with passion and professional expertise, uses high-quality materials and is continuously fine-tuning its metal fabrication and welding techniques. In fact technical expertise and knowledge go hand in hand with the quality of the materials and the ability to turn traditional artisan metalwork fabrication into expert joining technique.

During the years Satinox definitely increased fabrication of bowls for



industrial use: leavening containers and bowls with bottom self-draining system for continuous mixing lines as well as bowls with heating/cooling system for specific kneading purposes and bowls with customized brackets for handling automatisation.

From project development to product manufacturing careful examination of any special production needs is utterly essential to find the ideal solution to optimize bowl performance and consequently machine performance. Strict compliance with the drawings, the painstaking attention to tolerances along with machining precision guarantee tailor-made products of any shape and size.

www.satinox.com





TORQUE LIMITER ECE IN A VERY FLAT **DESIGN**

Robust and perfected safety without compromises

echanical Torque Limiters are used in all kinds of technical application areas. Their job is the protection of products and expensive devices.

Torque Limiters react very sensitive to the smallest increase of torque and disconnect the drive from the following masses in a split second. That's why they are also called "Safety Couplings".

The disconnection is forced, that means it has no effect on the function in case of an electrical power outage. A reason for a torque overload is for example the accumulation of material. That's why torque limiters are also called overload clutches.

The special thing about Type ECE is the axial short design, which requires a very small installation space. This simple and robust functional principle has thousandfold proved itself. It has a reliable function and still needs just few parts.

High-precision torque limitation is guaranteed with the use of special disc springs, they also enable a very wide torque range without changing the disc spring.

The perfected functional principle cuts the torque between the engine and the machine within few angle degrees. The couplings have a fixed point switching. That means one



switching point per turn. That is important to retain the reference point of the machine.

To stop the drive immediately in case of an overload, it is advisable to place a proximity switch to the disc spring. The disc spring moves while the torque limiter is disconnecting the drive from the machine. The signal from the proximity switch can be used for the drive control to stop the engine immediately.

Type ECE has a keyway for the torque transmission between engine and torque limiter.

Chain wheels, belt pulleys etc. are mounted on the engine shaft and screwed on the flange ring of the ECE for the torque transmission.

The torque limiter ECE is available in 14 sizes, and torque ranges from 2 Nm to 900 Nm are possible.



SOLVE FERMENTATION CHALLENGES THROUGH APPROPRIATE VALVE SELECTION

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

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 medium.



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



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

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



ISOLCELL FOOD-GRADE NITROGEN GENERATORS: FROM PIONEER TO INTERNATIONAL PLAYER

Isolcell solutions are highly customized, reliable, and always at the top of the technology available today

ver 60 years of experience

Since 1958 Isolcell has been designing and manufacturing plants that exploit controlled and generated atmosphere technology. Isolcell was the first company in Italy to develop this method of food preservation, later extending the use of its nitrogen generators to other production sectors. It is recognized as a world leader and is part of an industrial group headed by Finanziaria Unterland SpA.

Isolcell is present worldwide with a network of distributors and resellers, operates according to the highest quality standards and its product range complies with the most stringent European and international directives.

On-site nitrogen production, sustainable productivity

The air we breathe consists of 78% nitrogen, 21% oxygen, 0.96% argon, and 0.04% carbon dioxide, plus other components. Nitrogen is an inert gas that lends itself to a multitude of uses. Over the years, we have invested considerable resources to study the application possibilities and make them easily available to companies. Traditional supply methods such as high-pressure cylinders or liquid nitrogen tanks create disadvantages for companies. Transport and rental costs, delays in external



supply, the need to have a dedicated and delimited space, safety controls, and maintenance... all result in significant costs that are not always predictable. These factors have pushed Isolcell, for some time, to study an alternative system, more economical,

functional, and ecological: the selfproduction with the use of nitrogen generators.

Isolcell generators: nitrogen right now, simply

The traditional methods of nitrogen



distribution, especially in the last 15 years, have been gradually replaced by autonomous generators. This has resulted in clear advantages for companies. First of all, they can count on a constant and punctual supply that does not depend on external sources. Moreover, they can achieve significant savings, cutting the costs of other types of supply. They can also operate with simplicity: just one click is enough to produce the necessary quantities of nitrogen on-site, in total safety and with the desired purity.

Food grade nitrogen

Nitrogen is classified as a food additive when it comes into direct contact with food.

The abbreviation identifying food nitrogen is "E941".

In the European Union, a specific directive indicates the minimum requirements for the use of this gas as a food additive.

Isolcell's nitrogen generators with PSA technology can supply nitrogen in full compliance with the parameters indicated by this directive.

Benefits: Nitrogen in the food industry is used to maintain the original organoleptic and nutritional characteristics of packaged food products. Modified Atmosphere Packaging (MAP) involves the use of nitrogen, carbon dioxide, and oxygen mixed in optimal percentages to meet the preservation requirements of various food products. These gas mixtures slow down the aging process, preserving color and taste with freshness.

Nitrogen is generated only on demand (stand-by function).

From 0.25 to 0.39 Euro per M3 of nitrogen produced, depending on the purity delivered. Amortization of the generator cost normally in less than 24 months.

The choice of high-quality molecular sieves combined with an automatic filling system specially designed by Isolcell technicians allows to limit to a minimum the maintenance inter-

ventions on the generators and eliminate costly reintegration or replacement of molecular sieves which, in optimal conditions, have a life of more than 50,000 working hours.

Nitrogen generators Isolcell PSA NIMOS NL

Isolcell PSA NIMOS NL nitrogen generators are more efficient, quiet and easily expandable, compact, and with an essential geometry to ensure easy access to all pneumatic and electronic components.

The components that constitute the NIMOS NL generators, including the design of the machines, are designed and manufactured with the latest technologies and are the result of more than 12 months of work at the plant in Laives (Bz) by the technicians of Isolcell's Research & Development Division, followed by a long series of field tests carried out at some historical customers. Numerous international trademarks characterize a series of nitrogen generators destined to be the point of reference for many years.

The product range, the widest currently available on the market, consists of 2 series of machines able to cover the needs of most industrial applications:

- NIMOS NL PSA M Series for low flow rates, from 0.5 to 33.7 Nm3/ hour, compact but with the same reliability characteristics as the larger models.
- NIMOS NL PSA S-D Series for medium and large flow rates, from 3 to over 5000 Nm3/hour.

The design of the Isolcell PSA NIMOS NL S and D nitrogen generators minimizes space requirements and allows nitrogen flow rates from a few liters per minute to thousands of cubic meters per hour.

Thanks to the modular design, you can expand your production capacity by adding additional columns or new modules. It will therefore be



possible to exploit the advantages of a "Multibanking" system capable of optimizing work cycles and energy consumption.

All Isolcell nitrogen generators are equipped with a residual oxygen analyzer which, in addition to measuring and displaying the residual oxygen value, controls the correct operation of the generators, guaranteeing the production of nitrogen of quality perfectly compatible with your needs.

The operating parameters of the generators are displayed on a 5" color touch screen.

ISOLCELL WEB SERVER INDUSTRY 4.0

The new N2 Industry web server designed and developed by Isolcell is a remote control system dedicated to data collection, remote control, monitoring, and diagnosis of Isolcell's ON-SITE nitrogen production plant.

The N2 Industry web server removes all restrictions on the distance between the user and the system. Remote control access is possible via computer, smartphone, or tablet.

www.isolcell.com



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

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



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

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 vari-

ety 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 capacities, while multiple cells can be connected."





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

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 for the food and pharmaceutical industries.

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.

www.syntegon.com



Andreas Schildknecht, Product Manager Robotics at Syntegon



ELMITI SRLELECTRIC HEATERS











e are a leading company in the design and production of electric heaters, which are available in standard or customized versions, according to customer request.

Since 1979, year of foundation, we have always been characterised by a stable growth that brought us to increase not only the national trade but above all the international trade. More and more often foreign companies turn to us to obtain Made in Italy products, in which they recognize the high level of quality and reliability. Besides quality our strong points are flexibility, that allows us to satisfy the most varied needs of the customer, as well as fast delivery times. They are around 3/4 working weeks for custom-made products and 3 working days for standard products.

Our tube diameter can be 16, 12.5, 10, 8 and 6.5 in different material such as mild steel, AISI 321, AISI 316 L and INCOLOY 800. Raw materials are all of European origin.

We are well integrated in many product sector and above all in the food processing industry.

These are some of our main items:

- · Electric heaters for cooking
- Electric heaters for pasteurization
- · Electric heaters for sterilization
- Electric heaters for desiccation/dewatering of fruit and vegetable
- · Electric heaters for smoking
- Electric heaters for washing and drying. $\widehat{\mathbf{m}}$











€ EP50-75.SRT

The most advanced, flexible mobile cleaning platform in the world

It washes, foams, & sanitises and has the power to clean drains, chutes, floors (with added floor cleaner), roofs, chillers, overheads, connect to CIP sprays and more.

It can even be connected to power a tub & crate washers. There is the option of adding time saving CIP spray bars and high-pressure rotors. If you would like to talk to one of the engineers about the Euro Pumps mobile cleaning platform or how any of our CIP extras can be customised to suit your individual needs, call us today.

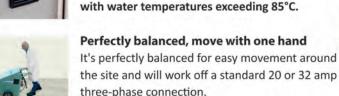
Supplied ready to work

Your Euro Pumps EP50-75.SRT mobile cleaning platform arrives ready to go to work with all hoses and attachments.



Fan Cooled to Run Hotter Longer

Euro Pumps allows you to clean on demand anywhere in your plant, inside or outside. It will work reliably with water temperatures exceeding 85°C.





Built-in protection for longer life

The EP50-75.SRT Pump system PLC monitors built in Water Inflow, Oil Temperature and Oil Pressure sensors for asset protection and longer platform life.



More information

Euro Pumps EP50-75.SRT the smarter platform that allows you to clean faster, with better flow and at higher temperatures.



TECNOCEAM 2021:

WITH YOU IN THE FIELD OF MPV (Minimally Processed Vegetables) TO CONTINUE TO GROW

l he vear 2020 saw TECNOCEAM, from its headquarters in Collecchio (PARMA, Italy), remain guaranteeing its partners reliable, timely and continuous support. Since 1979, the Company, always attentive to seize consumer trends and to identify and meet market needs early, has participated in significant developments in the consumer sector, adapting challenges from different fronts. It has always managed to face them successfully by developing alternatives and increasing its efficiency.

Having been using the software connection and the 4.0 interface for some time, we can constantly monitor the operation of our machinery, regardless of logistical distances, thus being able to promptly solve any hitch, find solutions to unblock production stops and prevent system failures.

Flexibility and proactive attitude are our constant.

With these proven strengths and an increased team spirit, in 2021 we are ready to continue growing together our historic international Customers, who continue to choose us to innovate, and new enterprising and courageous Companies, which need to invest in a reliable partner to do better and more, and therefore turn to us for our know-how and expertise. We are all convinced that, despite the pandemic, consumer needs and the evolutionary trend of food technology will continue to tend towards minimally processed fresh vegetable food products with

MACHINERY APPLICATIONS

- calibration - cooking - grilling - concentration - desalination - desalination - desalination - cutting - cutting - filling of solid and - washing - centrifuging - drying - thermal treatment (pasteurization, cooling)

incisive service performance, ready and simple to eat. Foreseeably, the focus will tighten on the guarantee of food safety of these "lightly-processed" products and the greater preservation of their natural contents according to even more rigorous quality standards. At the same time, the reduction of energy costs and the urgent need to make production processes increasingly respectful of the environment will be primary.

Our short-term goal is to make available to our Customers various innovations and upgrades in the field of **hygienic design, sustainability** and the development of **new tools for service**. With our skills, your inputs and precious collaboration we are ready to modernize the field of MPV together and give it new life.

WE BELIEVE IN IT AND TOGETHER WE WILL SUCCEED!



www.tecnoceam.com

PROCESSES

Processing of ready-to-eat fresh fruit and vegetables (MPV – Minimally Processed Vegetables): ready salads, washed/peeled/cut vegetables and fruit, fresh fruit juices (smoothies).

Processing of fruit and vegetables for freezing: cooked/arilled vegetables, washed/cut fruit.

Processing and filling of fruit and vegetables for long-term storage: tomato based sauces, pesto sauces such as Pesto alla Genovese, creams, patés, pickles, fruit in syrup, fruit purees, jam and marmalade, fruit juices, etc.

Preparation of fresh ready meals with short shelf-life: soups, pasta dishes, cooked/grilled vegetables, etc.







In recent years Tecnoceam has developed technologically performing solutions to meet the needs of the market related to the production of vegatal-based sauces such as pestos (of fresh basil "alla Genovese", dried tomatoes, etc.), creams, patés (of olives, eggplants, mushrooms, etc.), legume hummus, especially for short storage. This range of equipment includes standalone machines for medium productions, suitable for the treatment of fresh vegetables, their cooking and mixing with other ingredients according to various recipes. On the other hand, Tecnoceam is the undisputed leader in the design and manufacturing of complete industrial plants in Italy and abroad for the production of basil pesto "alla Genovese", the flagship product of leading exporting producers in the world, with which the company has a solid business relationship. Another field in which it has specialized is that of vegetable grilling systems (suitable for courgettes, aubergines, artichokes, mushrooms, potatoes, squash, etc.) intended for packaging in trays for ready consumption, preservation in oil (pickles) and also freezing. In the sector under development of ready meals Tecnoceam is a benchmark for fresh vegetable/legume soups and cereal dishes production plants that can be customized according to specific needs. These products are particularly appreciated by consumers for their nutritional and freshness characteristics similar to home cooked food.

Thanks to its flexibility and absolute reliability Tecnoceam can be your strategic partner, too! $\widehat{\mathbf{m}}$

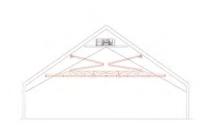


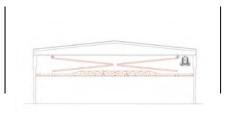




BORGHI SRL: CEREAL STOCKING AND TRANSFORMATION PLANTS











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

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

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

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

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

However, we could state, in the first analysis, that a silos plant with:

a.many cells, of modest capacity and with different grains, is used to make quality.

b.few cells with large individual capacities and few varieties of cereal, serves for convenience exploiting the market prices for supplying goods speculating on the cost (e.g. cereal purchase and storage during the harvesting period)

The silos are divided into two above mentioned large categories:

Vertical silos

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

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

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

Horizontal silos

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

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

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

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

The covering can be realized by means of prestressed concrete trusses or in metal where for impor-

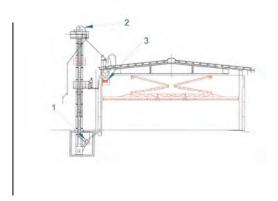


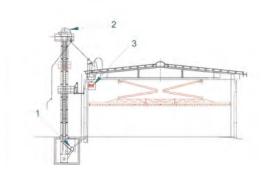












tant lights (over 30m) it is an obligatory choice. The theory used to calculate the pushing on the walls (a fundamental element for calculation and design) is the one best known as "land pushing".

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

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

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

DESCRIPTION OF A FLAT WARE-HOUSE MECHANIZATION TYPE

A chain conveyor (1) is mounted in one side of the warehouse (normally the longest) for cereal loading and unloading destined to the warehouse storage, in fact: the conveyor is mounted on the bottom of a reception pit regularly covered by a self-supporting truckway grating along the entire length of the conveyor or only where it is strictly necessary (e.g. near the point of unloading of the vehicles and/or in other points, where it is deemed necessary, depending on the activity to be carried out).

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

The elevator will raise the cereal and load the warehouse loading belt (3). The belt conveyor (3) will be equipped with a tripper (4) with a motorized advancement, able to discharge the cereal inside the warehouse on time. The warehouse loading and unloading robot is positioned at the tripper discharging. This robot is substantially able to run along the whole length of the warehouse and it can rising and lowering for the whole height of the flat warehouse.

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

As it is easily understandable, once the cereal is discharged from the tripper and it touches the robot wormthreads, the same is pushed on the opposite side. When the cereal reaches the opposite side, a special rocker system will indicate that the cereal has reached the desired position, so it will drive the tripper to move in a predetermined measure; consequently the loading robot will move and repeat the same cycle up to the total filling of the warehouse.

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

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

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

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

As shown in the operation description, the loading and unloading robot is the main performing element of mechanization. $\widehat{\mathbf{m}}$

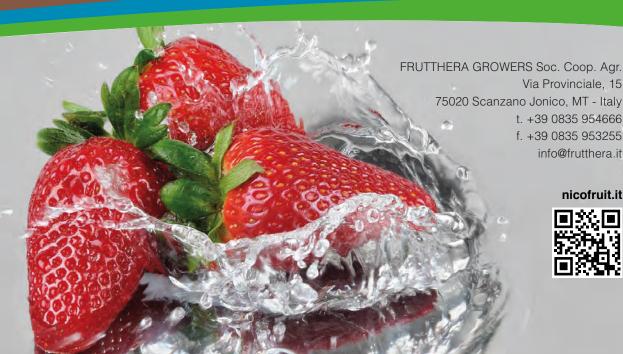
www.borghigroup.it





Full of Vitality





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nicofruit.it

ZANIN F.LLI SRL IS SYNONYMOUS WITH QUALITY, RESEARCH AND CUTTING-EDGE PRODUCTS



ZANIN MALTING SYSTEM

lexibility, customisation and ad hoc services complete the qualities of this all-Italian excellence.

They specialise in:

- Cereal maltings (beers and malted flours),
- Flour mixing silos,
- double suction stainless steel sieve cleaners for food use
- air filtering systems
- DUST STOP, the patented ZANIN hopper for product loading without dust dispersion and without suction.
- innovative sieve and drum cleaners complete with new generation suction systems for cereals
- seed sorting lines,
- energy saving and low environmental impact dryers,
- refrigeration systems
- silos for controlled grain cooling.

In the industrial sector

they are specialised in the handling and storage of fertilisers, they design and produce made-to-measure COAT- ING, they are experts in cleaning and control during the rail and ship unloading phases, they design and produce port hoppers, belt and chain conveyors, large bucket elevators for port handling.

Founded in 1956 by Giuseppe and Arcangelo Zanin, it is now run by Oscar and Nicodemo who continue to research and develop new solutions for the market. Among their proposals are machines for the food sector, given the ever-increasing demand, thanks also to this extensive experience in different fields, it is considered an important company in both the industrial and agro-industrial sectors.

In recent years there has been a lot of talk about **malting**

The art of malting is no longer relegated to large-scale industrial production. Now it is possible, thanks to Zanin f.lli srl, to produce excellent and customised malts starting from 500kg batches. The 60 years of experience in drying combined with 60

years of experience in air handling completely satisfy the need to produce large varieties of malted seeds. and thus offer millers special flours, new bases for bakery products, preparations for the intolerant or allergic. In beverage, master maltsters can customise malts and distillers can improve their secret recipes.

flour's solutions, The Zanin brothers have developed a system that receives, weighs and mixes the different flours homogeneously to allow users to guarantee better products and customisable recipes. Offering a tailormade product is no longer a problem. With an ISO 9001 TÜV SÜD certified production process, Zanin F.Ili supplies quality machines and systems, designed with the best 3D graphics programs, created with the latest generation of laser cutting, bending and punching machines, tested and produced by Zanin's modern workshops under the careful supervision of Oscar and Nicodemo.and their exceptional knowledge of the industry





that over 60 years of experience can guarantee.

Zanin f.lli srl is also environmental quality; machines are designed to reduce electrical and burner consumptions and above all to reduce impurities in the air. The patented DUST STOP is the flagship of this more eco-sustainable vision of the world, no dust during the delicate phases of product unloadings.

Food sector

- CEREAL MALTING plants
- Flour treatment, mixing and weighing plants

• Stainless steel machines for the treatment of products for human use

Agro-Industrial sector

- Cleaning
- Drying
- Mechanisation
- Storage and Ventilation
- · Customised Solutions
- Accessories and Components
- Turnkey Solutions for Cleaning, Drying, Cooling and Storage

Industrial sector

- FERTILIZERS, cereals and minerals treatment plants
- · Logistics and intermodal conveyors

for port and rail facilities

Their solutions:

- Bucket elevators, with capacities up to 650 t/h
- Belt and chain conveyors, with capacities up to 1000 t/h
- Ship unloading plants, 1000 t/h
- Weighing hoppers for wagon and truck, and hydraulic tipper for trucks unloading
- Receiving systems with rapid dispatch to warehouse
- DRUM COATING
- Rotary pre-cleaning drum for unloading from ship, 1000 t/h.

www.zanin-italia.com





NICOFRUIT PAST, PRESENT NICOFRUIT AND FUTURE



Full of Vitality

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

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

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

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

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







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

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

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

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

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

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

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

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

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

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

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

www.nicofruit.it





GEA HIGH PRESSURE HOMOGENIZATION TECHNOLOGY IN FOOD & BEVERAGE APPLICATIONS

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

How homogenization enriches food products?

The benefit of high pressure homogenization is well known in dairy, food & beverage industries for subdividing particles or droplets present in fluids, and reduce them to the smallest possible size, down to nanometer range.

Enhanced stability, shelf life, viscosity, color and taste are the essential characteristics that the emulsion gains through this process. Homogenization contribute in increasing digestibleness and, as consequence, facilitating assimilation of the nutritional principles as well.

The use of high dynamic pressure and homogenizing valves specifically designed by GEA experts for different applications, allow to subdivided particles at the required size and efficiently mix ingredients at the lowest possible pressure, ensuring energy and cost savings.

What makes GEA your ideal partner?

The most important key of success consists in the close collaboration with customers. The connection of common efforts enable to implement innovative and tailor-made solutions,











to maintain continuous product development and to guarantee efficient operations with excellent results on the final products. The latest set-up and continuous improvements on production technologies allow the company to offer a complete range of homogenizers, from laboratory up to the industrial scale.

Thanks to a strategy of development of both established and potential applications, often based on cooperation with our customers' Research and Development Centers, GEA can offer highly specific and customized process solutions to always meet, ensure and repeat over time product quality excellence.

All GEA homogenizers are designed CIP and SIP, they are available with cGMP documentation and approved FDA and 3-A certification; GEA is also able to support clients for the IQ/OQ qualifications and product test (FAT-SAT).

Ariete Series. The state-of-theart technology for power, reliability and flexibility.

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

Main advantages:

Easy to use

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

One Series.

The combination of convenience and quality to deliver unmatched benefits. These 3-piston homogenizers are simple and versatile machines manufactured to ensure easy maintenance and simple installation. Available in five versions, the series can meet any production need (from 300 l/h up to 10.000 l/h - 250 bar). Main advantages:

- Ready-to-use
- Ideal for small-medium dairy & beverage industries
- High versatility and smart installation
- Long lasting core components

- Reduced maintenance cost
- · Safe sanitary design

Find the perfect homogenizer for your product

The Laboratory and the Innovation Center, just refurbished in November 2019, represent a unique resource for customers to directly test homogenization technology on their product samples, refine receipts, develop high efficiency homogenizing valves and evaluate the performance of installed machines. Highly qualified staff can support customers in the development of new products, to test maximum process efficiency conditions and product scalability to industrial production processes.

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

gea.com/homogenizers 🏛







Boost up the taste of nature

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

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



NUTRITIONAL CONCEPTS LAB

Innovative open R&D facility for the fruit and vegetable sector and the food industry at Villa Flora Venlo

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

Retention of bioactive substances and vitamins thanks to low temperatures

MiFood developed its Nutritional Concepts Lab specifically for prepar-

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

Suitable for the development of new liquid and dry products

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







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ers around each product particle, and to vary the vacuum during the process.

Brightlabs and expert network of food and technology specialists

Companies active in fruit and vegetables and food producers can book half-day sessions at the Nutritional Concepts Lab for testing and product development.

Small-scale production runs are also possible. In addition, these activities can be supported by the new R&D facility's network of food and technology specialists. Batches from 10 to 500 litres can be processed. Furthermore, customers can use Brightlabs to determine the constituents, quality and food safety in vegetables and



fruit. The Nutritional Concepts Lab obviously maintains strict confidentiality when working on projects. For more information about the Nu-

tritional Concepts Lab and product

innovation, please contact Raymond Nolet, +31 6 10322186, send an email to info@mifood.nl or browse to www.mifood.nl mm



EXHIBITIONS EXHIBITIONS EXHIBITIONS

2021-2022

SIGEP

15-17/03/2021



Fair for bakery, pastry, ice cream, coffee.

mcTER 12/04/2021

ROME

Exhibition on energy efficiency.

mcT COGENERAZIONE

21/09/2021

MILAN

Exhibition for cogeneration.

FACHPACK

28-30/09/2021

NUREMBERG

International packaging trade fair.

MEAT-TECH

22-26/10/2021

MILANO

Fair for the meat and ready meals industry.

HOST

22-26/10/2021

MILANO

Fair for bakery production and for the hospitality.

SAVE

27-28/10/2021

VERONA

Fair for automation, instrumentation, sensors.

mcT ALIMENTARE

28/10/2021

BERGAMC

Fair on technology for the food&bev industry.

MECSPE

23-25/11/2021

BOLOGNA

Fair for the manufacturing industry.

SIGEP

22-26/01/2022

RIMINI

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



31/01-02/02/2022

COLOGNE

Fair for the sweets and snacks industry.

INTERSICOP

19-22/02/2022

MADRID

Fair for bakery, pastry, ice cream, coffee.

FRUIT LOGISTICA

09-11/02/2022

BERLIN

Fair for fruit and vegetables.

TOUS

BEER&FOOD ATTRACTION

20-23/04/2022

Rimini

Fair for beers, drinks, food and trends.

COSMOPROF

10-14/03/2022

BOLOGNA

Fair for the cosmetic production chain.

ProWein

27-29/03/2022

DUSSELDORF

International wine & spirits exhibition.



MIDDLE EAST 2021/22

GASTROPAN

21-23/09/2021

ARAD

Fair for the bakery and confectionery industry.

GULFOOD MANUFACTURING

07-09/11/2021

DUBA

Fair for packaging and plants.

HOSPITALITY OATAR

09-11/11/2021

DOHA

Fair of Hospitality and HORECA

PROPAK VIETNAM

10-12/11/2021

SAIGON

Fair for packaging, bakery, pastry.

WOP DUBAI

22-24/11/2021

DUBAI

Fair for for fruits and vegetables.

DJAZAGRO

22-25/11/2021

ALGERS

Fair for companies of the agro-food sector.

ANUTEC

02-04/12/2021

NEW DELHI

Fair for the food&beverage industry.

PACPROCESS FOOD PEX

09-11/12/2021

MUMBAI

Fair for product from packaging.

GULFOOD

13-17/02/2022

DUBAI

Fair for food and hospitality.

IRAN FOOD BEV TEC

07-10/06/2022

TEHRAN

Fair for food, beverage&packaging technology.

PROPAK ASIA

15-18/06/2022

BANGKOK

Fair for packaging, bakery, pastry.

GULFHOST

08-10/11/2022

DUBAI

Fair of hospitality.







EXHIBITION

2021-2022-2023

VINITALY

10-13/04/2022

VERONA

International wine & spirits exhibition.



26-28/04/2022



International packaging trade fair.

ANUGA FOODTEC

26-29/04/2022

COLOGNE

Fair on food and beverage technology.

CIBUS

03-06/05/2022

PARMA

Fair of food product.

IPACK-IMA

03-06/05/2022

MILANO

Exhibition

for the packaging industry.

MACFRUT

04-06/05/2022

RIMINI

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

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24-26/05/2022

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Fair for industrial automation sector.

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24-27/05/2022

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Technology fair for packaging.

FISPAL

21-24/06/2022

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Fair for product from packaging.

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30-08/01-09/2022

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The trade fair for powder processing.

DRINKTEC

12-16/09/2022

MONACO

Fair for the beverage and liquid food industry.

SIAL

15-19/10/2022

PARIS

Fair on food products.

SUDBACK

22-25/10/2022

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Fair for bakery and confectionery industry.

BRAU BEVIALE

08-10/11/2022

NUREMBERG

Fair of production of beer and soft drinks.

SIMEI

15-18/11/2022

MILANO

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

ALL4PACK

21-24/11/2022

PARIS

Exhibition about packaging technology.

INTERPACK

04-10/03/2023

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Fair for packaging, bakery, pastry.

IBA

22-26/10/2023

MONACO

Fair for the bakery and confectionery industry.

04-08/10/2021

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MODERN BAKERY

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MOSCOW

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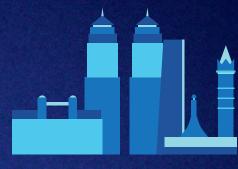
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