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The Monthly Magazine for the Plastics Industry

tecnoEdizioni *Group*

n.5

YEAR 28
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STRATEGIES

HT-Cooling becomes part of the Galletti Group

The expertise of HT-Cooling and the innovation of the Galletti Group: a strategic alliance in the industrial cooling sector

HT-Cooling, a company specialized in the design, construction and installation of industrial cooling systems, proudly announces its entry into the Galletti Group, an international reference in the HVAC sector.

This strategic operation expands the Galletti Group's offering, introducing new sectors and allowing HT-Cooling to benefit from the structural and financial strength of a family-led group with over 100 years of experience in the air conditioning market.

Michele Galletti, CEO of Galletti Spa, expresses his enthusiasm: "We are very happy with the operation. HT-Cooling and our group

share a common objective: provide precise solutions and technical responses to markets where competence and flexibility are fundamental. HT-Cooling's know-how in the industrial cooling sector puts us one step ahead: we know the needs and, thanks to group synergies, we will be able to place complete, technically cutting-edge and highly customized solutions on the market."

Present on the market since 2022 and already a reference partner for national OEMs in the plastics sector, HT-Cooling will further strengthen its structure with the inclusion of new professional profiles. This expansion aims to complete and strengthen the existing



Soluzione per il raffreddamento Aria AC-Plus A

team, continuing the market penetration action.

The acquisition of the majority share of HT-Cooling by the Galletti Group was completed in July. In October, HT-Cooling will exhibit at FAKUMA and is already confirmed to participate in K2025, the world's leading trade fair for the plastics industry.



Michele Galletti (Galletti Spa)



Team HT-Cooling Srl

YES IT'S TRUE



HT-COOLING becomes part of the Galletti Group, an international reference in the HVAC sector.



FUTURE STARTS TODAY.

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Friedrichshafen, 15/19 October 2024

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Fakuma 2024: news and preview from exhibitors - page 42 - 104

THERMOFORMING

CMS Eidos The reference machine in heavy gauge vacuum forming

The EIDOS encompasses sophisticated mechanical solutions to guarantee the best performance and an innovative software, for total product usability that is extremely easy to use.

- The frame and plug assist movement with 4 electrically coupled servo motors (gantry) transmission occurs via fixed toothed columns, eliminating moving mechanical parts that protrude from the machine.
- New part cooling system with mobile drawholes installed on the plug assist structure.
- Rapid format change thanks to fully automatic window plate and clamp frame
- Mould-plate has a servo movement managed via PC with stored speed and positioning information. The patented movement is achieved thanks to two electronically coupled servo motors (gantry), ensuring a quick and exact positioning of the mould.
- Closed cabin to reduce problems of dust and surrounding climatic variations to a minimum.



IPM

Socketing of corrugated PE and PP pipes

Automatic inline belling machines for PE and PP double and single wall corrugated pipes, ultrarib pipes, ranging in length from 1.000 up to to 6.0



MECCANOPLASTICA GROUP New full-electric model: HE800D

High productivity and compactness are the fundamental characteristics of this machine, born from the trust received from the end customer



MIXACO

A legacy of innovation in industrial mixing

Transforming plastics with precision: cutting-edge container and heating/cooling mixers for unmatched quality and efficiency





Marco Mastrosanti

Tecnoplast: literally everywhere

As the mists of autumn arrive, we prepare for the annual ritual of the quintessential October trade show, to say nothing of the K.

Fakuma is upon us, and the rubber/plastics world is quivering for yet another merry-go-round.

It makes one think that in spite of all the super distance communication technologies -hyper-developed, moreover, during the unfortunate Covid period- fairs are still the driving moment of promotional meeting and moment of excellence for the launch of novelties and discussion of the most important topics of the period.

It is in human being to wallow in productive chatter, in continuous confrontation, in exchanging words, emotions, smiles and even anger-why not-and thus make the "game" of work enjoyable and productive.

Productive for sure, judging from the issue you are leafing through of Tecnoplast, as usual one of the most important in terms of pagination and content of the year.

And even the print magazine, which has been given up for dead by many for twenty years or more now, especially during trade fairs regains its glory. And it is precisely at the Fakuma, where magazines are available to visitors at one of the entrances, that one witnesses the peregrinations of enthusiasts, readers, technicians and more, who come dutifully to pick up their magazine.

Of course then you find us online, on LinkedIn, see our videos, and pretty much anywhere in the plastic world for the orb terraqueous all you can follow us.

But still, that tactile pleasure of touching the magazine, of smelling the ink, is still a plus that makes our publishing unique, and special.

Happy reading then, and happy fall fairs, we will see you around, literally everywhere

Marco Mastrosanti

tecno Plast

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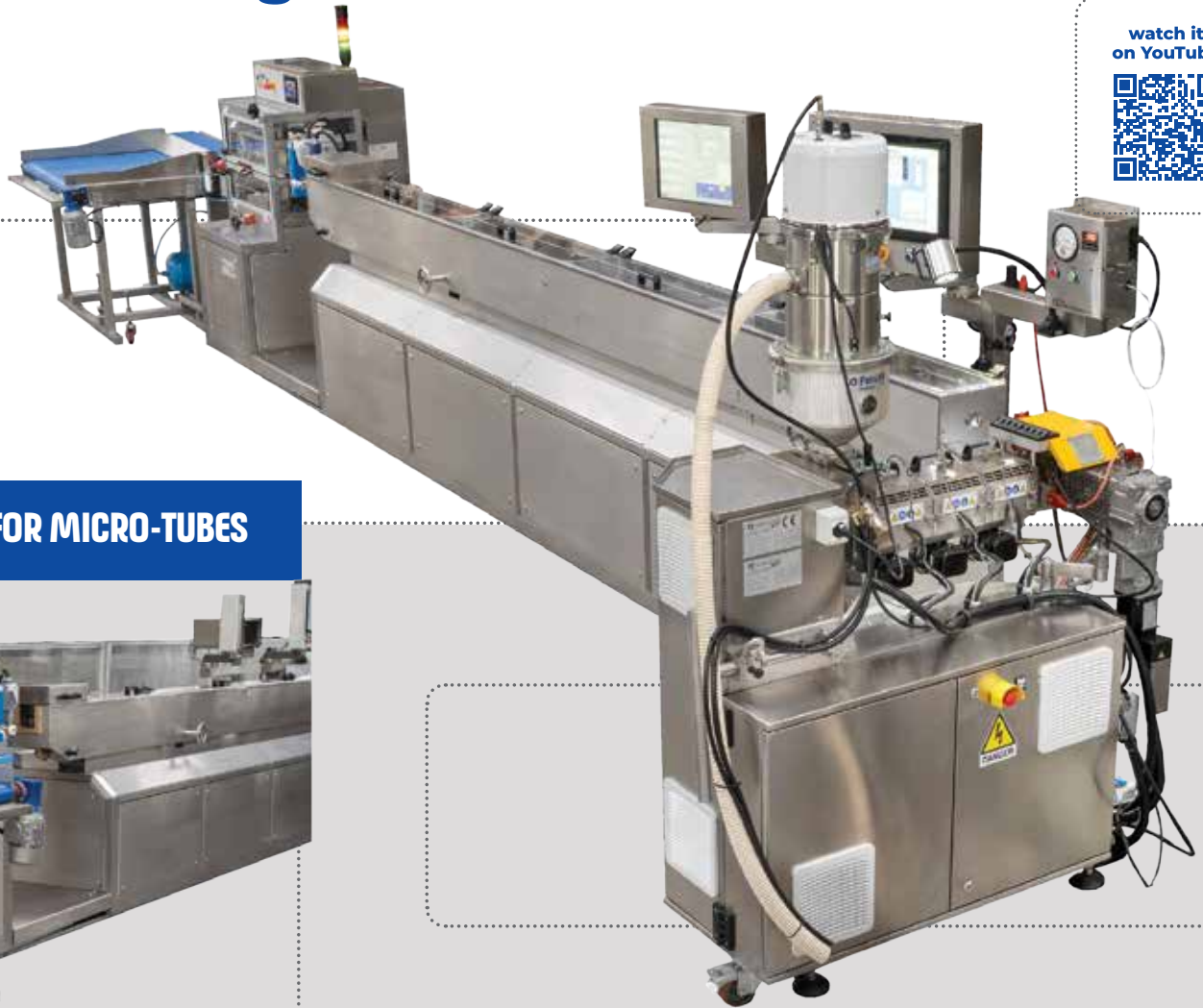
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- **BUMP TUBING**
- **STARTING FROM 0.4 mm OD**



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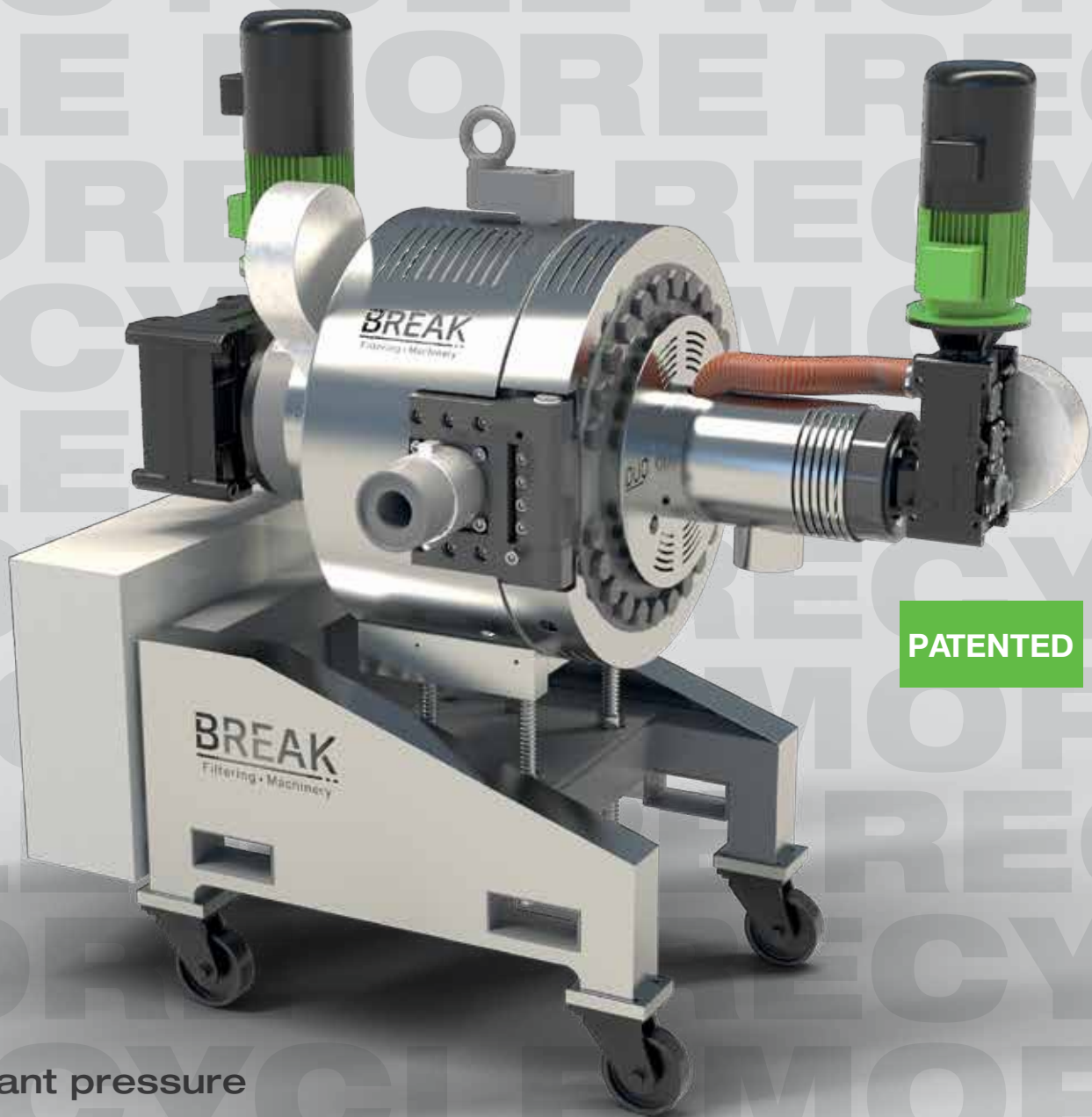
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Tria: Innovating the Future of Recycling Solutions Since 1954

The company embraces innovation and prepares for a new state-of-the-art facility by 2026.

Tria was founded in 1954, from the intuition of Angelo Anceschi who studied and produced the first blade granulator; a few years later his son Sergio joined him, and together they developed the industrial project, expanded the product range and entered the international market. In the late '80s - early '90s the third generation joined the company: Luciano, Marco and Claudio, who gave further impetus to the introduction of new technologies and the creation of a more modern organisation. The company's growth continued with technological partnerships with companies in Europe and overseas, and with the opening of four subsidiaries: Germany, Brazil, America and China. In 2016, Tria renewed its Board of Directors, opening it to external management, and in 2019, Stefano Venturelli was appointed as the new CEO. To date, the group has 94 employees worldwide, 65 of them at the Italian headquarters. Exports are 90%, half in Europe and half outside Europe.

customers can view the machines and test them with their own products.

Photovoltaic panels will be installed on the entire roof surface, fully meeting the building's energy needs and a significant portion of the production. The new site's project aligns with the developments of the main markets, industrial companies' needs extend far beyond product quality: safety, environmental impact, and quality of working conditions are fundamental parameters for establishing strong and lasting relationships with customers. The needs of employees have also evolved: a better work-life balance has to be a goal in order to gain loyalty and engagement.

Innovations to meet customer needs

Tria's payoff states: "Your recycling needs. Our grinding solutions"; it is the originality of the company's products, tailored to the needs of each transformation technology, that has allowed Tria to be recognized by customers as a benchmark in

the field of inline recycling, production waste, and plastic manufacturing.

Examples include the latest two series presented at recent trade fairs: one dedicated to thermoforming and one to blow molding.

For thermoforming, the evolution of the previous TF Series, which has more than 500 units sold worldwide, is the TS 30 Series.

New features include different looks and design, improved ergonomics, reduced power consumption, increased quietness, and easier cleaning.

With three models available: 9030, 12030 and 15030, Tria's granulators are able to grind PP, PS, PET, PLA sheets from production lines up to a maximum width of 1570 mm, thickness up to 3 mm, with both upward and downward-facing cups, with a maximum height of 120 mm.

This increases usability, allowing the insertion of freshly thermoformed sheets without the need to reduce their size before grinding.

The grinding chamber has also undergone a restyling: increased internal space that improves material grip by the rotating knives, water cooling as standard on all models that guarantees the grinding of thermoformed slabs at temperatures of up to 80°C / 176°F, and Nitox treatment to reduce wear over time.

Anti-slippage rollers and anti-winding system of the sheets are other of the new features introduced for the TS grinding compartment.

Series BM 20 is the name of the new Tria granulator dedicated to the world of blow molding, combining the tangential chamber features of their best seller, the BM Series, with the small footprint of the JM 20 Series.

This new model is suitable for all those companies



Evolution and looking to the future

At the end of 2025 and early 2026, TRIA's headquarters will have a new location and a new look.

From Cologno Monzese, Tria will move to Verano Brianza, moving from the current 8.200 m² to an area of approximately 22.000 m².

The structure will consist of two main units: the office area, with modern equipment and furnishings, and multifunctional meeting & call rooms.

The production area, on the other hand, will be equipped with a modern automated warehouse with a stacker crane, vertical drawer warehouses, and various equipment all connected to the SAP management system, already installed in 4 out of 5 locations. This level of automation will streamline many processes and make the company even more efficient.

There will also be a test room/showroom, where





that need an high-performance machine with low consumption, small dimensions and that can grind small hollow bodies, such as bottles, detergent containers, and similar items.

A wider hopper and the shape of the grinding chamber, which echoes that of the larger series dedicated to blow moulding, ensures that the material does not get stuck or float, but is immediately captured by the rotating knives.

A wheeled base, reduced footprint and reversible



hopper with no need to modify the machine complete the new features of this BM 4220.

Standard features include: a screen with a surface area of approximately 50% of the knife rotation length, which guarantees a higher production of ground and quality material; access to routine maintenance parts in total safety and without the need for tools; hopper and aphonic box.

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Sytrama: sustainability and its corporate responsibility strategy

Sytrama integrates sustainability and corporate responsibility across environmental, social, and governance practices, focusing on energy efficiency, employee well-being, and long-term business success.



The second approach is to develop low-energy products and services that respect the environment as much as possible for its customers. For example, Sytrama robots can be equipped with an Energy Saving system to reduce compressed air consumption. By a special circuit, the vacuum level is maintained within certain values. This level is set from the control panel. By doing so, the suction system is deactivated, fostering a reduction of compressed air consumption up to 75%. The cost of this option is amortized in a very short time. This saving needs to have been seen from an energetic and economics point of view.

Another measure in support of the company's "green" policy is the energy recovery system, similar to the systems mounted on hybrid cars. This system allows, during the deceleration phase of the robot axes, the accumulation of energy and this energy can be used during peak consumption working phases of the robot.

The impetus given in recent years by the government incentives for Industry 4.0 has led to more and more robots being equipped with remote modules connecting to the corporate network, granting two fundamental benefits. Firstly, the connection

The themes of corporate responsibility and sustainability have highly increased in the last years and Sytrama has taken those arguments into account on a daily basis. The focus is on climate change but also on the concrete requests of the legislator. In fact, energy costs are increasing and are becoming more and more important for both companies and end users.

Sustainability and financial information are therefore part of the new legal framework for every company and have the same priorities. This set of rules is divided into three main macro areas: Environment, Social and Human Rights but also Governance.

Sytrama has put in place a bundle of responsibility measures in all sectors where it works. The goal is to build entrepreneurial success in a sustainable way, for their stakeholders and for the future.

Environment

Economic and ecological sustainability has always been in Sytrama's DNA. Every day, the company creates long-term added value that is ecologically

compatible, socially correct, economically rewarding and finally with high prospects for the future. The macro area of the environment covers two main aspects: the former is related to the management of raw materials and energy in the production phase, while the latter considers the development of technologies that allow customers to produce even more efficiently by using resources and energy on robots and automations.

To reach this goal, Sytrama is focusing on two approaches. The first one is to significantly reduce its own energy consumption. All this is done through a series of measures: for instance, the conversion of the entire lighting system in their plant with LED lamps. They are little tricks that, if put in place, can lead to macroscopic savings. Addition components of the package is the waste prevention, reduction, and recycling. Sytrama staff always keeps an eye on the differentiation of waste not only at home but also in workplace. The aim is to gradually reduce the volume of undifferentiated waste and recycle as much as possible plastic, cans and glass, materials that can have a new life.





owned service support package. The second benefit due to Industry 4.0 is of course the connection of robots or working cells to the management software of companies. The exchange of data (via OPC-UA interface) and the monitoring of fundamental parameters such as working cycle, consumption, operating hours and so on, have allowed companies that have been able to exploit this data to optimize production. By doing so, they gain energetic and economic benefits. Finally, the quality in their robots allows Sytrama to offer a long-lasting life in all their automations, amortizing the initial investment. The company also offers a retrofit service, helping to extend the operating life of robots.

Social

The social macro area refers to Sytrama staff and people who gets in contact with Sytrama such as partners, customers and suppliers.

Sytrama's labor force is the most valuable asset for the company. Retaining employees and their know-how is a top priority for Sytrama.

A key factor to involve all the employees in these procedures is without any doubt to have a clear and open communication, which is considered an essential value for Sytrama.

Finally, Sytrama with the entire Nissei Plastics group organizes and carries out events such as "open house" events in Italy and in the other sub-

sidaries abroad, in order to promote its products and making the quality of automations touchable with hands, keeping alive the direct human relations with customers.

Governance

Everything about how Sytrama is controlled and managed falls within the domain of governance. In reality, governance is all about guidelines, laws, procedures and regulations. In addition to all this, internal processes and procedures must also be respected. In particular, the business system implemented by Sytrama is fundamental to implement the company strategy. Topics include: corporate governance, culture, ethical principles, business relations, integrity and transparency.

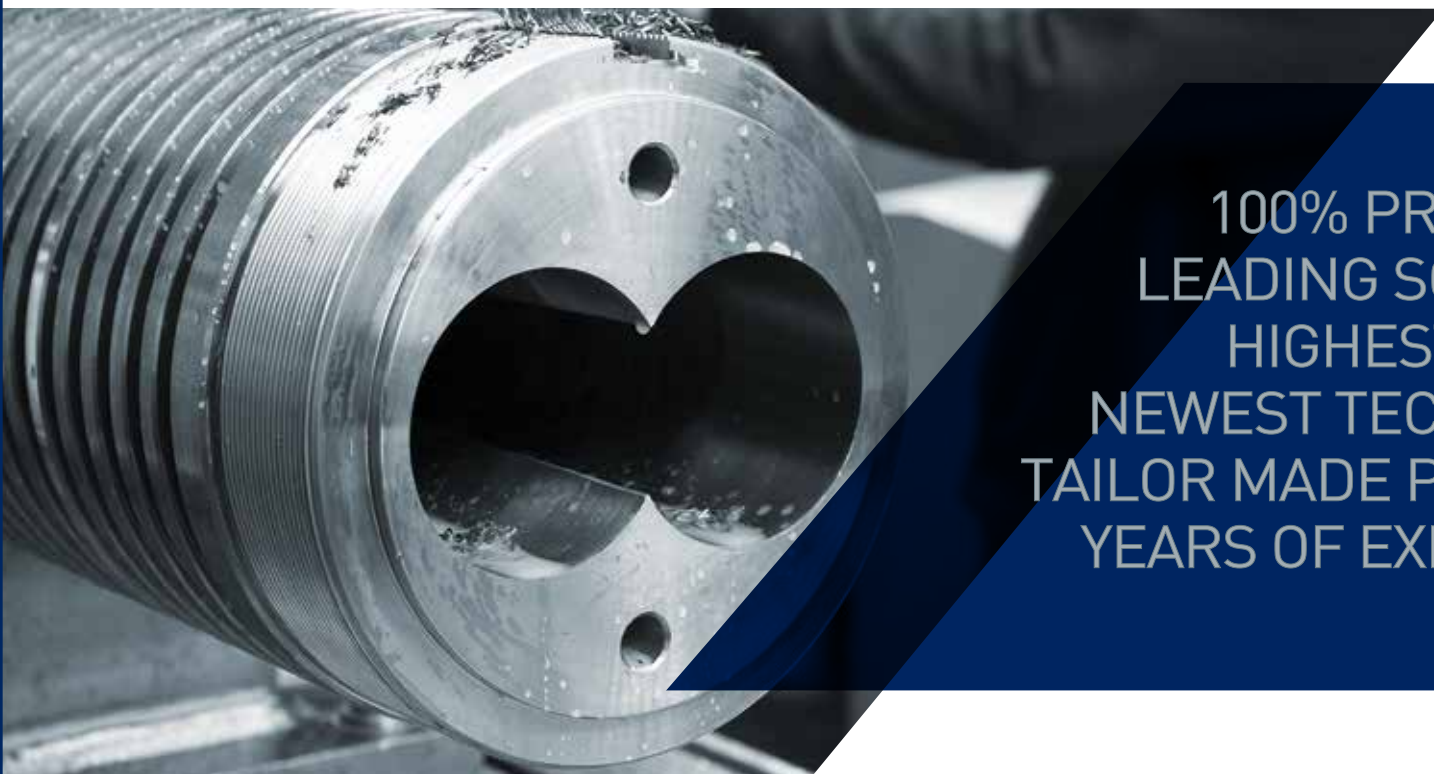
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Franplast S.P.A.: innovating with sustainability and excellence in thermoplastic elastomers

Pioneering eco-friendly solutions, gender equality, and international growth in the plastics industry.



Franplast S.P.A., an Italian company with more than 50 years' experience in the development and production of TPE-s styrene-based thermoplastic rubber for various application sectors, now has an increasingly sophisticated integrated management system, having recently renewed its ISO 9001 and obtained ISO 14001 and ISO 50001 certifications.

As OHSE Manager Roberto Farina recalls, "These certifications recognise Franplast's optimisation of an environmental and energy management system in line with the respective international standards". Having also calculated its carbon footprint, on December 23rd, Franplast obtained the prestigious Carbon Footprint certification according to ISO 14064-1. Also looking at the social aspect, today the company has simultaneously received ISO 45001 certification according to the international standard for employee health and safety and achieved the important UNI PdR 125:2022 certification for gender equality.

All the certifications mentioned above are attested by a third organisation (IMQ) and this, as a result of Franplast's virtuous path, awarded the company the prestigious Certificate of Excellence.

As CEO Elena Franceschetti says, "This is an important milestone for us in the challenging ESG objectives we have achieved, but it is definitely not a point of arrival".

In terms of environmental sustainability, a photovoltaic system made up of 2,469 panels with an average annual production of more than 1 million kWh has

been in place for more than a year, a concrete result of the commitment to cleaner and renewable energies. The environmental benefits are equally exciting with an estimated annual saving of almost 600,000 kg of CO₂, equivalent to the CO₂ absorption of over 22,000 trees in one year.

For Franplast, sustainability is a factor reflected in its products. In fact, in 2016 the company started working on eco-sustainable products by launching the 'Chemiton Life' brand on the market, which identifies compounds based mainly on recycled raw materials and/or derived from renewable sources, which constitute a good alternative to materials derived from fossil raw materials. Sustainability is therefore also reflected in its products that can be either biobased with a percentage ranging from 20 to 60% or have a recycled raw material content, which can range from 20 to 80% from the plastic recycling chain.

The result is a significant reduction in environmental impact, meeting the demands of a wide variety of districts. Franplast's Chemiton Life can therefore be used in a variety of application areas, from the industrial to the fashion, Home & Design and Sport & Leisure sectors, as it also has recipes approved for food contact. This proves that Chemiton Life is versatile and at the service of various uses.

Finally, in recent months Franplast's R&D team has developed a new series of compounds called: Chemiton TJB, which marks an important milestone in thermoplastic material innovation. As R&D Manager Gabriele Ercole says, "This family of products, available from Shore 00 40 hardness, is designed to meet the most sophisticated and specific requirements, ranging from special applications in contact with skin to food applications". Combining ultra-softness with both translucent and opaque surface finishes, the Chemiton TJB series stands out for its extraordinary fluidity and exceptional ease of colouring using polyolefin masterbatches. Research and development in Franplast's laboratories is essential to satisfy all customer requirements and develop customised solutions for a variety of application areas.

In an increasingly globalised world, Franplast has become a key player in the plastic rubber sector and specializing completely in the design and production of styrene-based thermoplastic elastomers TPEs. Today, Franplast being present in a wide variety of production sectors, is also present in different markets. Nationally, Italy's Sales Manager Filippo Bernardi comments, "We operate in a stable and consolidated domestic environment, which allows us to invest in

ambitious, long-term projects". Franplast also sells its products in the international market. By exporting its know-how, it has been able to skillfully build solid partnerships with customers and distributor partners in European countries, Eastern Europe, Northern Europe and also some important collaborations in the non-European market. Today the company can boast 50% of its turnover thanks to the external marketing of its TPEs, with a customised service and products. As Export Manager Elena Cominelli recalls, "Franplast has been exhibiting at the Fakuma trade fair in Germany since 2005, and again this year, almost 20 years later, we will be exhibiting at Messe Friedrichshafen from 15th to 19th October 2024. An international event not only focused on the German speaking countries but attracting an increasing number of visitors from all over Europe and also outside the continent, this is why we have decided to invest on a brand new stand having a double surface compared to the last edition". Franplast employees will be present at the booth and will be able to answer all visitors' questions and represent the values of a long-standing company looking to the future. Franplast is proud of a 360-degree growth path in terms of geography, product development and consequent application sectors, being an example of a historic company 100% made in Italy that brings its know-how to the international market.

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*Energy consumption referred to each KG of material processed.



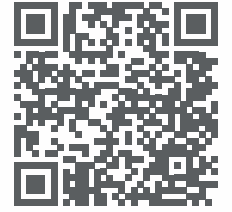
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PET RECYCLING | BOTTLE-TO-BOTTLE | VOCs & ODOUR REMOVAL

Aliplast and Mirage are partnering to recover plastic waste from the ceramic industry

Aliplast, active in plastic recycling and production, is joining forces with Mirage, a leading player in the ceramics industry. The two companies have created a virtuous circular process for the recovery of plastic films used in ceramic manufacturing processes.



Closed Loop for the ceramics industry: how it works

For more than 50 years, Mirage has been producing tiles for interior and exterior wall and floor coverings. The process that leads to their production goes through different steps, during which

the tiles are packed several times with the use of plastic films, with a procedure that leads to the use and disposal of large quantities of these films. The recovery project put in place by Aliplast involves, as a first step, a selection and volumetric reduction of this waste material; a phase that takes place direct-

ly on site, in the Mirage plants. Then, the material is sent to the Aliplast hub, where it is reconverted into granule and, subsequently, into new packaging film, ready to be fed back into Mirage's production circuit.



The recovery of waste material

The recovery activity is carried out according to a "closed loop" logic, a principle aimed at maximum sustainability that provides for the recovery of plastic waste from companies and the subsequent stages of treatment and regeneration to obtain a quality product, with technical characteristics equal to that made from virgin material, ready to be re-introduced into the production cycle.

The objective value of sustainability

The ceramics industry is increasingly geared toward sustainability. This is why it is important to know precisely to what extent a product or process contributes to the reduction of environmental impact. Quantifying savings objectively has always been one of the cornerstones of Aliplast, which for several years has been monitoring its greenhouse gas emissions associated with its five types of products: PE granule, PE film, PET granule, PET sheet and PET flake. Specifically, Aliplast operates by following the LCA (Life Cycle Assessment) methodology, which assesses the environmental footprint



of a product throughout its entire life cycle, so as to obtain an objective survey on its contribution in terms of emissions reduction, including the carbon footprint.

Aliplast's methodology and data

One of the data that is usually measured is CO2 equivalent, based on the IPCC 2013 GWP 100 methodology. The results of this analysis showed that annually, through the production of about 100,000 tons of recycled products, Aliplast avoids the emission of about 170,000 tons of CO2 equivalent (2022 data). This saving corresponds to more than 400,000

barrels of oil. In other words, the contribution of suppliers and customers who choose Aliplast's recycled products has a significant impact in reducing greenhouse gas emissions, comparable to the effect of about 100,000 gasoline-powered cars driving 10,000 kilometers in a year.

The results of the partnership with Mirage

Aliplast supplies more than 500 tons of shrink film to Mirage each year. This is a "Reload" type material, a trademark that identifies Aliplast products that have an extremely high percentage of recycled material, typically more than 80 percent. The use

of this type of material results in an environmental benefit of about 1,200 tons of greenhouse gases prevented. In addition, by taking back waste materials from customers, Aliplast avoids their disposal in landfills and gives them a new life with a view to a fully circular economy, with further benefits to the environment.

In conclusion, the virtuous relationship established with Mirage not only results in the supply of a packaging material perfectly suited to the type of use, but also entails real savings for the environment.

www.aliplastspa.com



A NEW EFFICIENT SYSTEM TO PRODUCE SPC FLOORS

From the power of stone dust Rodolfo Comerio has created a system to produce a floor that brings out the warmth of wood. A revolutionary new floor with SPC 'stone plastic composite' support made of stone dust with unique performance:

**WITH AN OUTPUT OF UP TO 12,000 KG/H
WITH A DIGITALLY PRINTED AND EMBOSSED-IN-REGISTER SHEET**

It is an innovative calcium carbonate-based material that provides qualities and features that other floors do not offer. The surface layer of the SPC floor is digitally printed with the same textures of wood and is made of materials that are resistant to footsteps, light and stains.



**WHAT
THE MARKET
OFFERS**

**WHAT
RODOLFO
COMERIO
OFFERS**

The floor is produced by applying a lower insulating mat made of closed-cell polyethylene with the function of further improving thermal and acoustic insulation, reducing noise from footsteps and protecting the floor from bacterial and fungal attack.

THE FLOOR IS CE CERTIFIED

It has utilisation class 23/34, is water and moisture resistant, does not warp, does not expand, can also be used on heated floors, is scratch and stain resistant and requires no maintenance. SPC flooring is the new frontier of environmentally friendly, fully recyclable thin floors that can be installed quickly and safely on top of any other flooring.

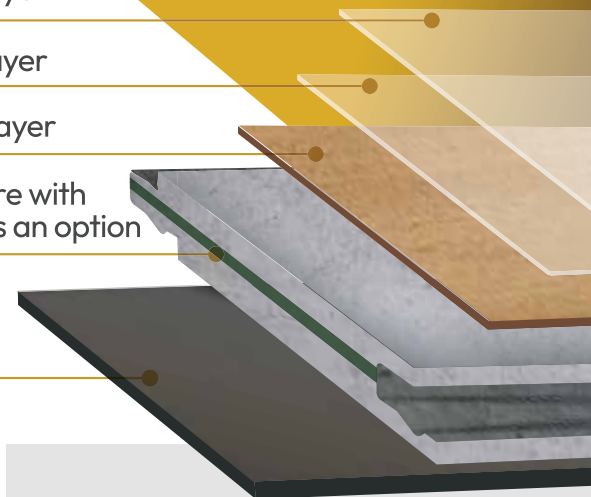
Ultra Matt UV
protection layer

Protection layer

Decorative layer

SPC rigid core with
glass fibre as an option

IXPE mat

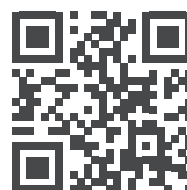


RODOLFO COMERIO S.R.L.

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The innovation of Meccanoplastica Group's new full-electric model: HE800D

Interview with Alberto Mencherini, Sales & Marketing Director, of Meccanoplastica Group.

Meccanoplastica Group is a Tuscan industrial reality active since 1983. The peculiarity of this company is the production of plastic processing plants: extrusion blow moulding, injection blow moulding machines and stretch blow moulding machines for PET preforms, the latter being handled by the Iberian branch in Barcelona. We had the pleasure of talking to Alberto Mencherini about the latest innovation.

The HE800D is the latest full electric innovation at Meccanoplastica Group: what is it?

It is a new full electric model called the HE800D born from the trust received from the end customer, Graham Packaging. Starting with our standard machine, the technology was then customised in depth to their requirements. It started out as a co-extrusion machine, capable of producing 500ml and 1 litre medical bags for the pharmaceutical sector. We are talking about bags that are used for transfusions and drips. Although Graham is an American company, the plant we are building will be installed in a European location, more precisely in Eastern Europe.

What are the special features and innovative characteristics of the machine?

High productivity and compactness are the fundamental characteristics of this machine. Suffice it to say that the hourly output, also thanks to the high quality of the moulds that the customer has purchased for it, is around 3,600 pieces per hour. We are talking about 12 seconds per product to make one cycle, which is a very good timing. Furthermore, the strong automation is another great boast of this plant, in particular the presence of two pick and place robot units, which enhances the production potential of the machine. Finally, the use of special devices also reduces consumption. In fact, a device reminiscent of the KERS of Formula 1 cars is used inside the machine. By taking advantage of moving devices, even the braking moment offers energy recovery and thus savings.

Is the pharmaceutical sector important to you?

Definitely, it is one of the very important application branches for us. In the last two and a half years, we have had a kind of boom, most probably due to the events following the pandemic. This, in fact, led to a considerable increase in



IDENTITY CARD

MODEL: **HE800D**
MANUFACTURER: **Meccanoplastica Group**
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Phone: +39 055 898187
info@meccanoplastica-group.com
www.meccanoplastica-group.com





demand in the sector and consequently so did our injection and blow moulding machines. The goal, also with regard to this machine, is still to satisfy these large end customers as much as possible, in order to be able to make our way in the industry and also to future collaborations with them; in fact, the machine can now be considered tailor-made.

And what about the topic of sustainability? The path towards sustainability is now inevitable, given the future of the industry. For our part, the first steps have been taken, we are walking the hard road to reach our goal (= Sustainability Report); the company's will is clear and is to walk this road to the end, however bumpy it may be. Starting to work with large companies also involves this step.

The countdown to K 2025 has officially begun: will Meccanoplastica Group be there? Of course, we will be there and we will have an expanded stand, where we will bring our THREE FULL ELECTRIC technologies.



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Our Expertise

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LAB & PILOT SYSTEMS



TECHNICAL AND PRODUCTION SERVICES



CO-ROTATING TWIN SCREW EXTRUDERS



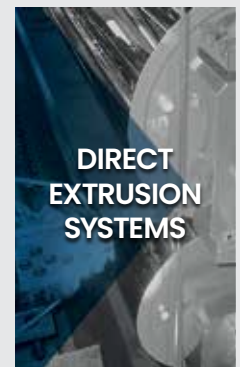
COMPOUNDING & MASTERBATCH SYSTEMS



ADVANCED RECYCLING SYSTEMS



WPC COMPLETE SYSTEMS



DIRECT EXTRUSION SYSTEMS

IPM: socketing of corrugated PE and PP pipes - injection system

Automatic inline belling machines for PE and PP double and single wall corrugated pipes, ultrarib pipes, ranging in length from 1.000 up to to 6.000 mm (12.000 mm length also possible, on request)



IPM (Italian Plastic Machinery) is a worldwide consolidated company which produces machines for the extrusion and packaging of plastic pipes.

Founded in 1987, it carries out the whole production process in its premises, starting from the design to the manufacturing of its equipment, thus guaranteeing quality and total Made in Italy.

IPM modern headquarters are located in Lugo di Romagna (RA), on an area of approximately 17,500 m², of which 7,300 m² are covered.

The partners, Ms. Silvia Geminiani, Mr. Claudio Argani and Mr. Bruno Barabani, point out that "in an increasingly complex global context, IPM's goal is to promote the improvement, competitiveness and growth of customers' companies, through innovation and technological development, ensuring them the best performance, supporting them till the full achievement of the pre-established results, contributing to economic development and improvement of the living conditions of people and planet". With a long experience and constant innovation, IPM is one of the most representative companies in this field, very often offering "tailor-made" systems to complete the extrusion lines for plastic pipes.

In Europe, where the use of PP pipes, but also those in PVC and PE, is growing rapidly, the demand for faster, higher-performance and automated lines is higher and higher, especially because of the shortage of trained workforce, willing to work shifts, even at night, all year round.

Furthermore, the implementation of automation and the digitalization of processes, the control and management in a 4.0 perspective have become essential



IDENTITY CARD

MODEL: **SOCKETING OF CORRUGATED PE AND PP PIPES - INJECTION SYSTEM (IPM patent)**
MANUFACTURER: **IPM Srl**
Via dell'Artigianato, 13
48022 Lugo (RA)
ITALY
Phone: +39 055 898187
www.ipm-italy.it



TYPE	O.D. MM
BA 160/INJ	110 - 160
BA 250/INJ	110 - 250
BA 500/INJ	110 - 500
BA 680/INJ	110 - 680
BA 800/INJ	110 - 800
BA 1200/INJ	110 - 1200



to increase the competitiveness of the pipe manufacturers, bringing about quality and reliability of products, which need testing one by one.

SOCKETING OF CORRUGATED PE AND PP PIPES - INJECTION SYSTEM (IPM patent)

It is a range of machines exclusively designed by IPM for the inline processing of PP and PE of double and single wall corrugated pipes, ultrarib pipes, even with very large diameters up to 1200 mm. They inject the socket directly on the pipe (PATENTED). This exclusive IPM system allows to obtain a RIGID, RELIABLE, SHRINKAGE-FREE SOCKET.

Compared to other existing systems (i.e.: by friction, by jointing system through sleeves), our machines offer valuable advantages:

- Perfectly welded socket, mechanically solid, aesthetically beautiful, with uniform, regular and homogeneous surface.
- Tolerances and characteristics according to EN 13476 standards.
- Absolute dimensional stability over time, even when the socket is subjected to the most varied environmental temperatures.
- Repeatability of the process regardless of the characteristics of the raw materials used and their various formulations.
- No influence on the socket of any ovalization of the pipe.
- Possibility of customizing the shape of the socket.
- Possibility of thickening the socket wall, on request.
- Possibility of socketing pipes of different materials (PP and PE) by the same machine and by the same equipment.
- High production to fully exploit the speed of the modern corrugation lines.

In addition, when compared to the traditional "friction" system with sleeves, exploiting IPM injection belling machines you reach:

- Removal of any warehouses for the sleeves, with considerable savings in space and money;
- Independence from third parties, i.e.: the suppliers

of the sleeves;

- Reduction of the costs for the gaskets (the inline belling requires just nr. 01 gasket instead of nr. 02 gaskets as when using the sleeves);
 - No waste of time or money for the identification of defects in the socket welding;
 - Elimination of production waste due to incorrect welding of the sleeve on the tube.
- IPM injection system is preferable to the inline socketing by the corrugator thanks to:
- Saving of raw material and speeding up of the production cycle with consequent reduction of the cost of the product (the sleeve is doubly long);
 - More solid joint, since the cutting phase of the internal wall of the pipe is not required;
 - No constraint on the length of the pipe to be socketed (with the corrugator the length of the pipe is constant);
 - Greater stability of the socket obtained, follow-

- ing up the reduction of the shrinkage due to the "memory" of the raw material;
- Less waste;
- Greater production capacity.

This range of machines is equipped with NEW VIDEO TERMINALS

- with SIEMENS 12-inch touchscreen panels of last generation, with improved performance in terms of speed;
- renewed graphic interface, with visual indicators of efficiency and energy consumption that allow an immediate understanding of the machine's performance;
- analytical alarm troubleshooting directly integrated on the videoterminal providing more detailed information on the causes that have caused the alarms;
- alarm history archive: the last 1000 alarm messages can be freely consulted by the operator;
- instruction manual and electrical diagram in .pdf format that can be consulted from the videoterminal itself;
- storing of the Format Recipes (Memory card) on an external microSD to avoid losing production data in the event of panel malfunction.
- maintenance job: scheduling of alarm messages,





whose text is specified by the end user, which are activated on the basis of certain occurrences bringing about the chance of planning scheduled maintenance.

- possibility to schedule the sending of emails to addressees that can be specified by the end user, when the conditions for activating the maintenance jobs occur (it requires internet connection).

TELESERVICE.

IPM wants to reduce distances and assist its customers in real time thanks to the TELESERVICE, which has been increased and facilitated by the spreading of broadband and of corporate networks (wired or wireless).

Through this service, IPM offers through an industrial router the remote connection of its machines to the user's corporate network (both Ethernet and



Wireless).

In alternative it is possible to connect using a UMTS cellular connection. This allows you to have a connection even where there is no corporate connection, neither wired nor wireless.

This device, especially with the rise of Industry 4.0, has become indispensable to safeguard the best performance in very short times, thus avoiding any costly machine downtime.



CMS Eidos: The reference machine in heavy gauge vacuum forming

Style and performance in a product that re-confirms CMS as the market benchmark for cut sheet vacuum thermoforming. The EIDOS encompasses sophisticated mechanical solutions to guarantee the best performance and an innovative software, for total product usability that is extremely easy to use.

The frame and plug assist movement with 4 electrically coupled servo motors (gantry) transmission occurs via fixed toothed columns, eliminating moving mechanical parts that protrude from the machine.

- New part cooling system with mobile drawholes installed on the plug assist structure.
- Rapid format change thanks to fully automatic window plate and clamp frame
- Mould-plate has a servo movement managed via PC with stored speed and positioning information. The patented movement is achieved thanks to two electronically coupled servo motors (gantry), ensuring a quick and exact positioning of the mould.
- Closed cabin to reduce problems of dust and sur-

rounding climatic variations to a minimum.

MAXIMUM CONTROL

Thanks to CMS ThermoActive, the thermoforming process parameter setting is immediate. A guided system makes the likelihood of error almost impossible, instantly highlighting errors and inconsistencies. The visual representation of the cycle provides clarity and immediateness to the software with learning times reduced by up to 53% (*). With CMS ThermoProphet (**), maximum heating stability can be guaranteed even in the presence of variables outside the thermoforming machine. Maximum quality from the first piece produced!

(* compared to previous solutions (** optional

SPEED AND ACCURACY

The sophisticated mechanical solutions allow for rapid movements combined with a completely new structural rigidity. The alignment of the new frame ensures excellent locking of the plate thanks to 4 motors. The new counter mould ensures doubled thrust levels (*) and an increased mechanical stability of 151% (*). The total absence of mobile transmission parts guarantees the reduction of the machine's overall height by up to 25% (*) while ensuring full control of the mould's maximum height, with or without loader and with both positive and negative moulds.

(* compared to previous solutions



New CMS HMI Thermo Active software designed specifically for the thermoforming process. The timeline and exclusive dashboard make supervising production and the process control instant and easily understandable.

OPTIMISED PROCESS

The new mould cooling system with "tilting" function reduces cooling times for the mould by up to 31% (*). The distance of the outlets from the piece and the width of oscillation can be programmed and stored in the recipe. The heating system with oscillating function guarantees maximum efficiency close to the clamping frame. The continuous power can be modified in order to better adapt the heating cycle according to the thickness of the plate, to achieve top quality with shortest heating cycle times and minimum energy consumption.
(*) compared to previous solutions

FAST FORMAT CHANGE

The production change times are extremely fast, thanks to the mould table that can be removed using a trolley with pneumatic tool lifting system (**). A second kit (**) allows for the reduction of 75% in mould installation time allowing for set up without stopping production. EIDOS is, therefore, the ideal solution even for single batch productions.
(**) optional

Different configurations

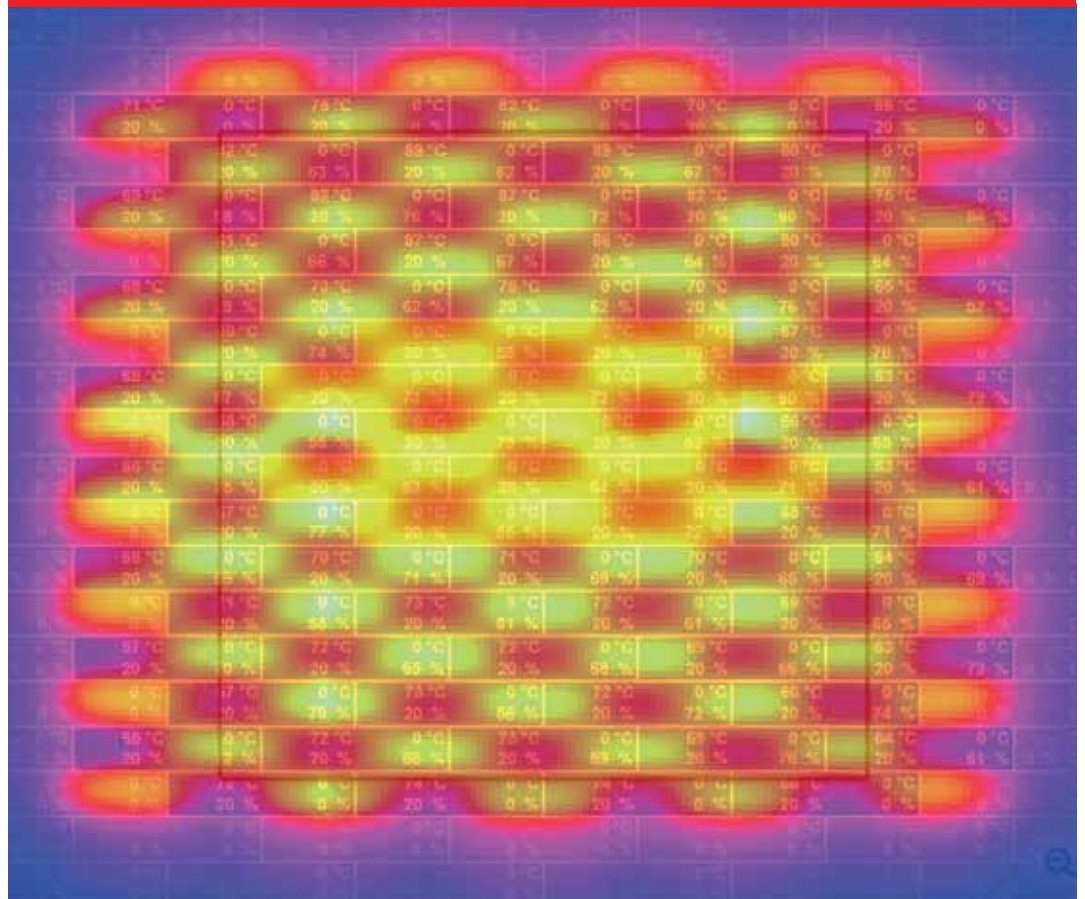
EIDOS WITH AUTOMATIC LOADER

All the advantages of the EIDOS thermoforming machine with the practicality of a system with automatic loading and unloading

Key buyer benefits

- Maximum levels of ergonomics: fully automatic sheet and moulded piece movement. The piece is positioned in the unloading zone so the operator has easy access to it.
- Full access to the sheet loading zone: avoids hav-

CMS's patented Thermo Prophet system for automatic heating management using thermal vision.

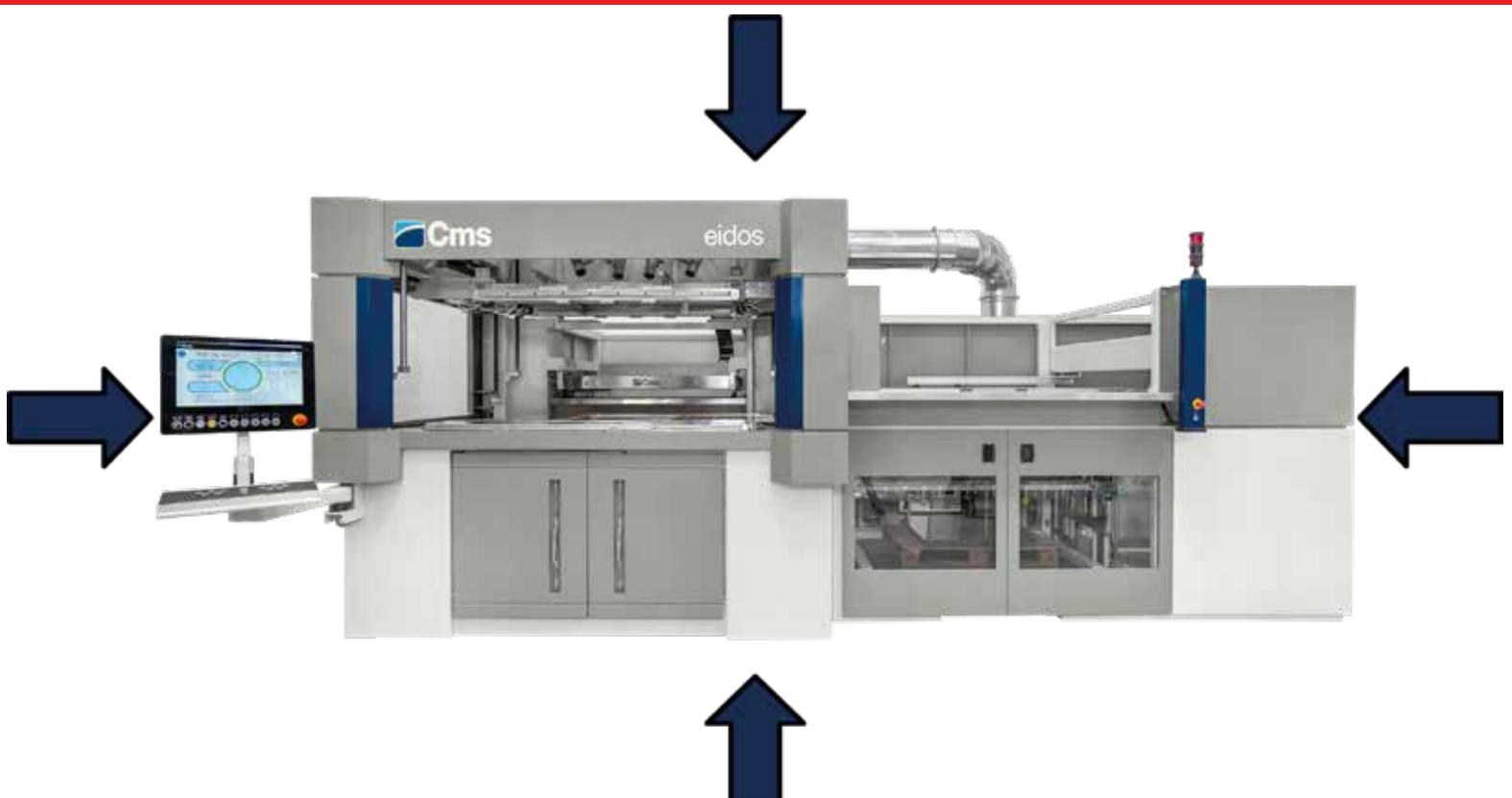


ing to interrupt the thermoforming cycle during the pallet loading operations with a 55% reduction in the time needed for this operation.

- Productivity without continuity solution: allows

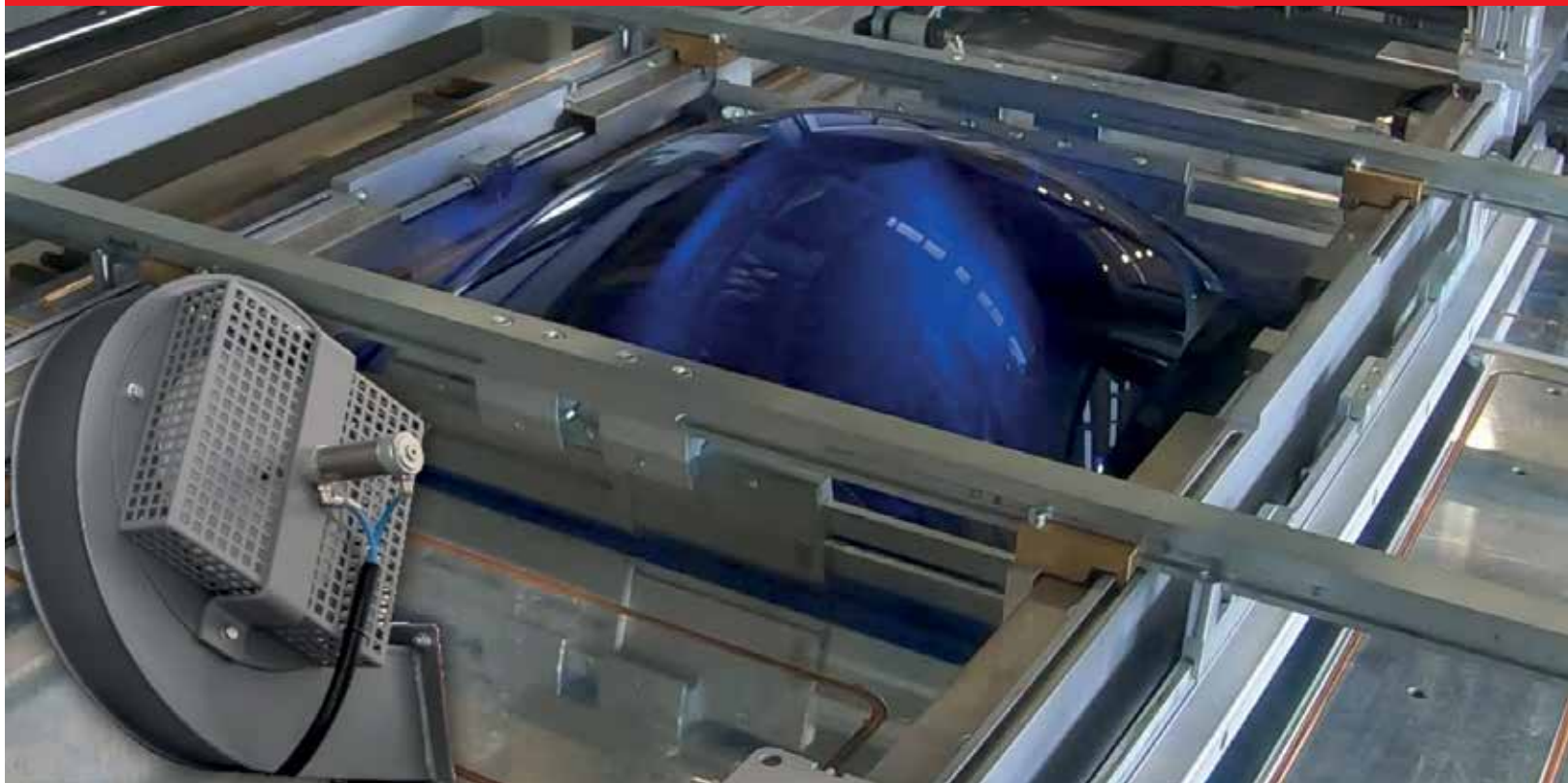
for smooth production avoiding delays, with a 75% reduction in the time needed to move the sheets or bulky pieces compared to manual loading/unloading

New machine layout. Thanks to the new mechanical solutions and closed cabin, the overall height of the machine is now reduced by 25% compared to previous models.



THE MACHINE OF THE MONTH

Sheet bubble electronic system: the bubble function is created using an electronically controlled fan. The bubble height control is achieved with the laser, infra-red or ultrasound sensor.



EIDOS WITH IN LINE UNLOADER

The same benefits as the automatic loader with in line unloading machine layout. The expulsion occurs via an ejector installed on the cart that positions the piece on the unloading table that swivels to provide the operator with excellent accessibility.

Key buyer benefits

- Simplified integration: allows for greater integration of the piece into the machining flow thanks to the separation between sheet loading zone and moulded unloading zone.

CMS Thermo Active a revolutionary interaction with your CMS machine

Cms Thermo Active is the interface specifically designed for the thermoforming process

- EASY TO USE: The look&feel, found on all CMS'



IP Cam for supervision: high resolution vision system integrated in to the software to allow for the process to be supervised in real time without the need to arrange platforms in front of the machine



New heating system available with HTS Ceramic, quartz or halogen heaters: the power control is achieved in real time without continuity solutions for better adaptation to the material's thermal features. The current reading for each channel means faults can be identified quickly.

products guarantees a simpler, more intuitive migration between products. In CMS Thermo Active the operator is guided through the process set-up operations step-by-step, to avoid the most common mistakes, thanks to a coherence check on the parameters inserted.

- INTUITIVE GRAPHIC REPRESENTATION: The new graphic representation of the machine cycle makes it easier to understand the program, providing an easy demonstration of the interaction between the different cycle functions. During everyday use, the exclusive dashboard clearly and instantly shows the data relative to the production in progress and the machine state. A complete production control system stores the process data and energy consumption levels making them available for subsequent analyses related to product batch quality.

IDENTITY CARD

Name: Eidos
Producer: CMS
 Via A. Locatelli, 123
 24019 Zogno (BG)
 ITALY
 tel. +39 0345 64586
www.cms.it



TECHNICAL DATA

Model	Max sheet size	Mould		
		Max height	Max size	Max force
	(mm)	(mm)	(mm)	(DaN)
EIDOS 1280	1260 x 860	450	1200 x 800	2000
EIDOS 1510	1560 x 1060	600	1500 x 1000	2000
EIDOS 1512	1560 x 1260	600	1500 x 1200	2000
EIDOS 2015	2060 x 1560	800	2000 x 1500	3900
EIDOS 2515	2560 x 1560	800	2500 x 1500	6100
EIDOS 2520	2560 x 2060	800	2500 x 2000	7500
EIDOS 3020	3060 x 2060	1000	3000 x 2000	10800
EIDOS 3525	3560 x 2560	1000	3500 x 2500	13500

Driving innovation in the plastic pipe industry: SICA's approach to energy efficiency, productivity, and user-friendliness

Navigating uncertainty with advanced solutions.

During the last three-year period, plastic pipe producers faced a peak in the raw material cost and an increase of the electrical energy price. Furthermore, the labor market has been characterized by a high turnover of skilled technicians which lowered the average knowledge of the operators. Thinking about the future, the word dominating every attempt of forecast for the year ahead is "Uncertainty". More than 50% of the world population is going to elections during 2024. Inflation and interest rates are high, and their lowering trend is still a question mark. The Ukraine war and Middle East conflicts are negatively impacting the economy of the developed countries. Moreover, the Artificial Intelligence and the European Green Deal are putting both the machine manufacturers and the plastic pipes producers in front of new demanding challenges.

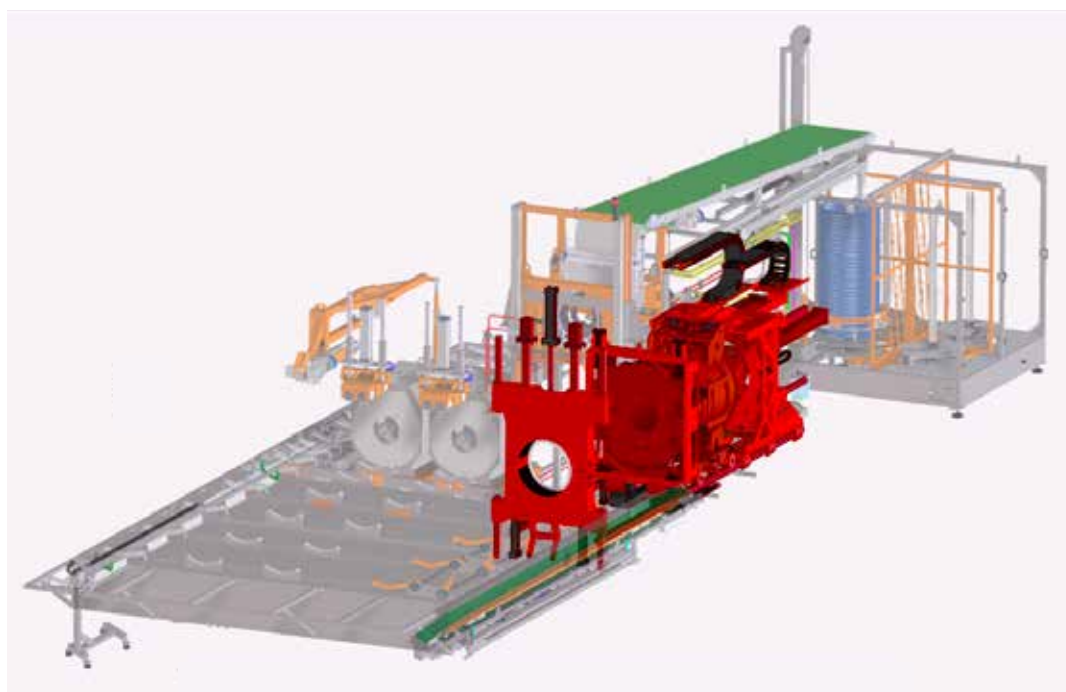
Innovation in the plastic pipe industry is the answer against uncertainty, higher production costs and lack of skilled operators. Innovation means faster production lines designed to be energy efficient and easy to use, setup and troubleshooted.

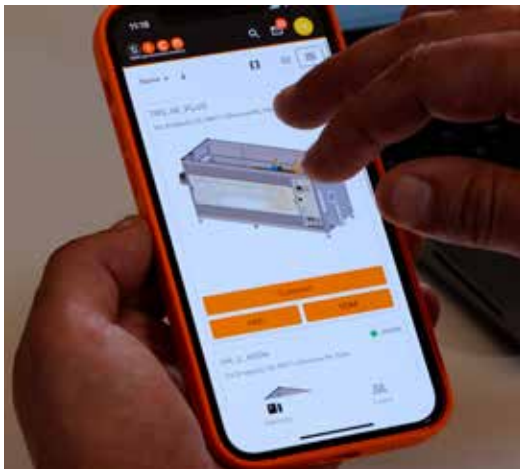
SICA's belling machines are equipped with Infra-red Short-Wave (IR-SW) ovens. They consume energy only when it is needed, as opposed to traditional ovens which consume energy continuously

whether there is a pipe present or not. Thanks to IR-SW ovens and the replacement of the hydraulics with the electromechanical actuators, the machine can save up to the 30% of the energy consumed by a traditional belling machine. To maximize the throughput and minimize the compressed air consumption, it is possible to equip the machine with a fitted external pressure chamber and a water-cooled mechanical mandrel. This new mandrel is a game changing solution which strongly improves the cooling capacity and, therefore, increases the belling machine output rate.

Another revolutionary technology now available in the field of the belling process, is the PVC-O Rieber socketing. The absence of the Rieber process in the PVC-O pipe sector prevented its application, even where it is considered decisive for the operating conditions for laying PVC-O pipelines. The Rieber process in the PVC-O sector is now available, meaning significant material savings due to the possibility of installing PVC-O pipes instead of 35-40% thicker PVC-U pipes of the same pressure class.

Another source of energy savings is replacement of the hydraulic power involved in the cutting machine portfolio. SICA's saws are now available in the "E" (electrical) version. Energy saving, repeatability and perfect quality of the cut are the three main features





of these new electrical saws.

The cutting machine portfolio includes the TRS-W saws which can cut and chamfer PVC-U pipes without removing material. This results in energy savings and a cleaner, quieter, and safer production environment.

SICA designs tailor-made solutions for the packaging automation with both traditional palletizers and anthropomorphic robots. SICA can provide the plastic pipes producers with a completely automated solution which delivers the pallet, with both the wooden timbers and the strap, to an AGV forklift. Automating the packaging allows automatically checking the quality of the socket without needing the presence of an operator. This is the purpose of Sherlock, SICA's socket quality visual inspection system, equipped with 3 cameras, to detect the presence of the gasket and both dimensional and aesthetical defects.

The Human Machine Interface (HMI) is designed to be user-friendly for an intuitive user experience. The operator does not set the parameters of the machine components anymore, but rather sets the dimensions of the end-product, and the machine automatically configures itself. The wizard guides the operator step by step during the tool change. Another big step forward in the field of the troubleshooting is in the user interface, where the HMI guides the operator highlighting the subpart of the machine involved and identifying the sensor that is triggering the alarm. A list of probable causes helps the operator to fix the problem. In addition, SICA web spare parts portal is available directly via the HMI, allowing the operator to immediately identify and order the spare parts needed. In addition, the software backup is available on the web portal on request.

Each machine can be equipped with a remote assistance module, allowing the connection with the ERP via the OPC-UA protocol and the cloud data storage. A dedicated function on the HMI allows the operator to do a snapshot of the current machine status and sent it to SICA's helpdesk.

Innovation means anticipating the challenges, creating new solutions to solve real problems and make them available on the market. This is what SICA does every day, this is what builds SICA's competitive advantage in the plastic pipe production industry.

www.sica-italy.com



www.esametal.com

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Tel.: +39 0442 412 753 - email: info@esametal.com

ALL THE PRODUCTION IS ISO 9001, UNI EN ISO 3834-2, EN 1090-1 (EN 1090-2, EN 1090-3) CERTIFIED

Medical extrusion lines: turnkey solutions for all needs

Tecno System is one of the leading companies in the design and development of complete lines. A crucial business for the company is represented today by the manufacturing of complete extrusion lines for medical tubes.

Tecno System's constant efforts in quality control and strict standards on internal and external processes ensure that the products fully comply with relevant national and international regulations.

One of the strong point and flagships offered by Tecno System is the micro medical extrusion line. These lines can generate mono-lumen, multi-lumens tubes (up to 18 lumens), mono-layer and multi-layer (up to 5 layers). The tubes can have an OD ranging from 0.40 mm up to a maximum of 14 mm and can be made from many thermoplastic material. Micro-extrusion semi-finished products are widely used in a variety of biomedical sectors, including cardiovascular, epiduroscopy, neurology, gynecology, urology, and more.

Extrusion of bump tubing, which is a tube that changes in diameter along its length. Is quite interesting typically, the end of the tubing closest to the person operating the device (known as the proximal end) is larger, while the end further away (the distal end) is smaller. This kind of tubing, sometimes called taper tubing or draw-down tubing, can have different diameters not only at each end but also along its entire length. Usually, the smaller end is inserted into the body, while the larger end connects to the medical device.

Manufacturers can make bump tubing from various materials and in different configurations. They



can customize the length of the transition zones between diameters and the overall sizes to fit specific needs.

The flexibility and precision of all these tubes make them an ideal choice for medical applications that require reliable performance and compliance with the highest quality and safety standards offered by Tecno System.

Another business of pride for Tecno System is the basic PVC catheter extrusion line is usually equipped with a extruders model TM 60-25 with 15" Touch Panel and a medical extrusion head model HD 2-12. About downstream, there are a cooling unit model R 50/5,5, a belt haul-off unit model TT800, and an appropriate diameter gauge system (ODAC 14 x/y/j) that ensure the accuracy of the entire tube before being rolled up by a semi-automatic double winding station model TS2600 equipped with an electronic roller system). Alternative configurations are available for customer, for example, relying on the extruder series haul-off unit, the possibility to choose from several options like frosty kits, wall thickness monitoring systems, and many others.

Tecno System is keen to underline a key feature of its lines: they are perfectly suitable also for spiral smoothbore medical tubes with rigid or semi-rigid spirals and for combining different polymers.

These lines are powered by two extruders (TM45-25 and TM60-25 series) with a 15" digital touchscreen and a 1.2316 steel medical extrusion die-head ensures high quality standards for this type of thermoplastic tubing extrusion, while a spindle trolley CM 50 series can be easily handled by operators to move and set up dies with diameters ranging from 12 to 50 mm. A perfect internal calibration through the spindle, in the downstream units, is guaranteed by calibrating systems located in a special stainless steel water tank with a closed-loop water circuit to





themselves are some examples among the practical implications of this innovative approach.

By opting for Tecno System's solutions, the customer will be supported in each stage to simplify as much as possible the investment project. Every product, indeed, is completely designed, manufactured and tested within the historic production plant located in Consandolo (FE – Italy), enabling the company to directly supervise every single phase in the supply chain and ensuring, so, the best qualitative standards for the final product and the possibility for the customer to rely on a unique referent for any type of issue.

www.tecnosystemfe.it



prevent any type of contamination. Water can be maintained constantly cool by a dedicated chiller that can be installed as an option on the line side, and a dedicated tube drying system allows the automatic drying of the pipes from the water in excess after the cooling processes.

All lines are totally customizable by customers in the best tailored way to meet their needs. Potential options about the line configuration are, for example, the possibility to implement double hopper

loaders, different screws for different thermoplastic materials as well as maximum levels of customization for what concerns the unloading bench.

In addition, it must be said that every Tecno System's extrusion line can be suited to the 4.0 industry standards with an appropriate OPC-UA communication protocol to increase exponentially the potential opportunities through digitization of the processes: real-time information, remote control of the line and hyperconnectivity between machines



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Bd plast: Innovations in filtration systems for the plastics industry

CleanChanger: advanced solutions for polymer extrusion and recycling.



Filtration systems are a crucial component of extrusion, re-manufacturing, and recycling lines of polymeric materials.

BD Plast supplies a complete range of products to extrusion plant manufacturers and plastics transformers all over the world composed by manual screen changers, static filters, hydraulic screen changers, extrusion components (adapters, elbows, pipes, static mixers, diverter valves, strand dies), continuous flow screen changers, continuous flow self-cleaning screen changers, accessories (hydraulic power units, undercarriage supports, elastomers).

Thanks to its wide products' range, BD Plast's technology can supply specific solutions capable of processing any kind of polymer while maximizing production and reducing at minimum material waste. Thirty-eight years of innovation, development of ideas, and proposals for innovative solutions have characterized BD Plast's approach to the market, with a propensity for renewal not only as regards the supply of systems but also for strategic choices

aimed at responding to various changes in the production context.

The patented self-cleaning continuous flow screen changer, CleanChanger, is currently at the top of BD Plast's range of products. The main strength of this product is conducting the self-cleaning cycle at particularly low back pressure. Additionally, this is continuous flow equipment, which means that, unlike other types of screen changers, the filtering elements can be replaced without halting the extrusion line. This eliminates the time loss and material waste typically associated with stopping and restarting the line. On CleanChanger the replacement of the screens takes place with the automatic ejection of the breaker plates, allowing easy replace-

ment of the filtering elements and further timesaving. Key features like low back pressure, automatic plate ejection, and reduced purge times enable 400 self-cleaning cycles.

Currently, over thirty CleanChanger are operating at plastics transformers and on extrusion plants assembled by the most important Italian and European manufacturers. Some players who purchased CleanChanger subsequently implemented a second unit, a sign of high satisfaction that BD Plast product gives to the customers.

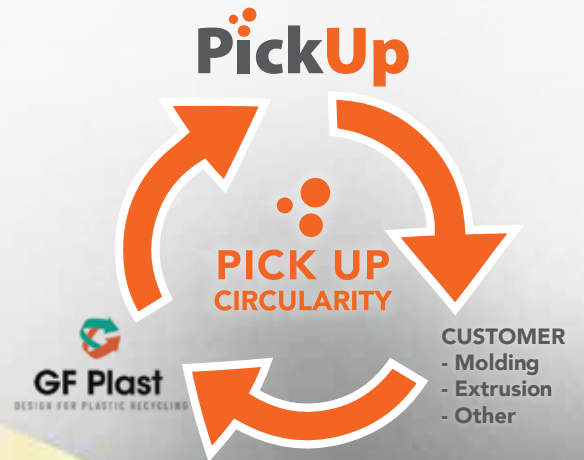
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FAP: from standard to unique solutions, anticipating future trends in various sectors

A focus on automation, sustainability, and high-performance materials.



Since 1987, the Italian company FAP has been at the forefront of producing complete extrusion lines and automatic winders for sheets and tubes, different converting machinery for foam, bubble wrap and other plastic materials, from design to final creation.

In today's market conditions, opening new business opportunities plays a role as crucial as economically efficient production of high-quality products that stand out among thousands of similar items. This is why FAP continually researches the global foam polymer market, developing cutting-edge production lines that adapt to current trends, defining its main qualities are flexibility and uniqueness. The company provides partners with the opportunity to produce and convert unique materials that can be used in the most unexpected and innovative fields. From standard packaging and thermal insulation foams to specialized solutions, whether flexible or rigid, lightweight or heavy, thin or thick, materials produced and processed on FAP's production extrusion lines and converting machines open up new perspectives on application possibilities.

Among the equipment designed and manufactured, FAP winders also play a crucial role in the final stages of production. Each winder is specifically designed and customized to match the unique characteristics of the material being produced, ensuring seamless operation and precision. This personalized approach guarantees that, once the extrusion process is complete, the product is perfectly prepared for further processing on other machines, maintaining the highest standards of quality and efficiency.

"If you're focused on creating something really important and challenging, it's going to be much harder to compete with you." The market for foam is currently experiencing intense competition. Manufacturers face two significant challenges. Firstly, due to the general trend of a shortage of skilled labor in the manufacturing sector, there is an increasing need to focus on maximizing the automation of production and technological processes. The cost of human

labor has risen substantially, meaning it is now far more cost-effective to invest in equipment capable of not only producing foamed polymers but doing so with the highest level of automation, quality, and speed possible.

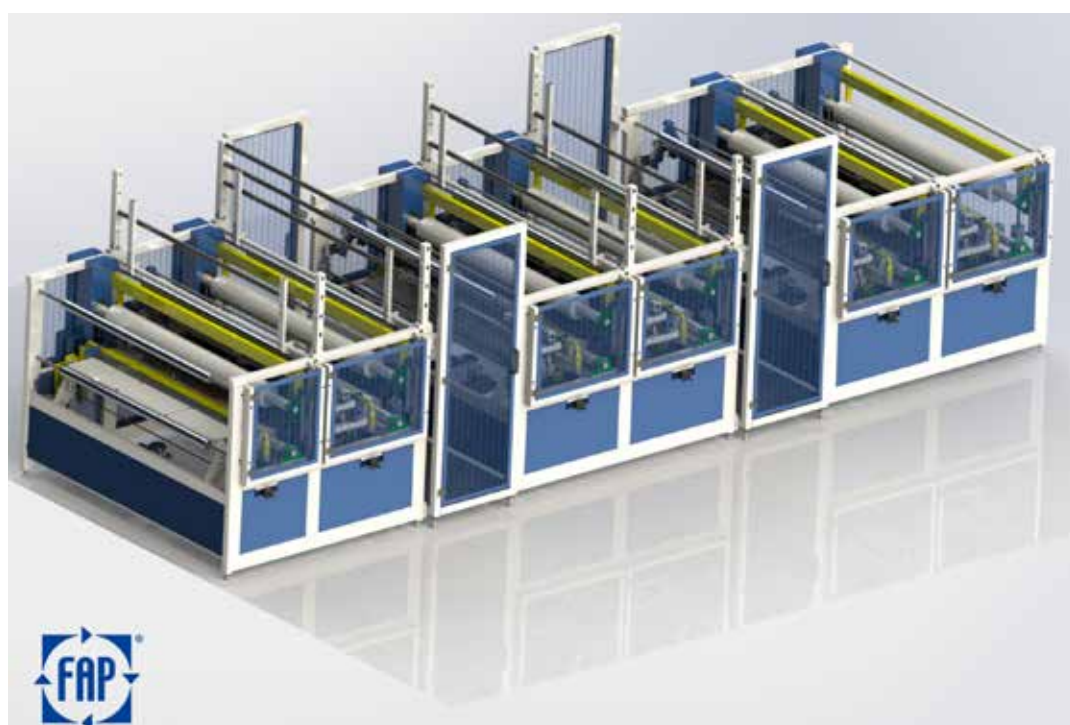
Secondly, production equipment must be highly "flexible" in terms of manufacturing, with the ability to produce both simple low-density foamed polyethylene materials and complex compositions of physically foamed polypropylene with ethylene-vinyl acetate, which can withstand high ambient temperatures, aggressive environments, and extremely high static loads, all on the same piece of equipment. Therefore, one of the focuses of the Italian Foam Centre is the analysis of new markets for technically advanced materials.

The uniqueness of physically foamed polypropylene lies in its extremely high resistance to temperatures, and low deformation under high loads (kPa). At certain densities and sheet thicknesses, physically foamed polypropylene can withstand long-term static loads up to 200 kPa (20,394 kg/m²), while the maximum ambient or surface temperature at which foamed polypropylene can be used can reach 130-150 °C. FAP's extrusion and laminating lines, in turn, provide manufacturers with the advantage of high performance in producing and lamination of physically foamed polypropylene sheets of various thicknesses from 1 mm to 40 mm and densities ranging from 25 kg/m³ to 250 kg/m³.

Thanks to FAP's counter-rotating twin-screw extrusion technology, with its advanced melt homogenization, stable formation of homogeneous gaseous structures, and precise control of polymer foaming, combined with comprehensive technological support, FAP can enhance key properties of foamed polypropylene. This includes improved vibration damping, achieved by blending different types of polymers to create unique and specialized compositions. This uniquely characterized end product can be applied in areas such as vibration isolation during the construction and repair of road surfaces, tram and railway tracks, bridges, multi-story parking structures, and wherever effective reduction of impact noise and vibrations is needed. It poses a serious competitive challenge to the market for rigid insulation types like PUR and PET.

FAP technology for production of Polyethylene (EPE) boards, the future leader in acoustic and heat insulation

It has long been proven that companies have demonstrated that fully recyclable low-density physically foamed polyethylene can compete in various areas of thermal and acoustic insulation. With the right technical equipment and modern production processes, physically foamed polyethylene boards with thicknesses of 30 mm and above can pose a serious challenge and potentially displace such materials as extruded polystyrene, mineral insulators, and polyu-



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rethane from the thermal and acoustic insulation industry.

The annual increase in the cost of polystyrene, restrictions on its use across various sectors, and tightening environmental regulations will necessitate a shift in the construction sector towards more affordable yet effective materials for thermal insulation and recycling. To make pricing competitive against polyurethane and polystyrene and ensure an efficient production process, the thickness of extruded non-crosslinked foamed polyethylene sheets should be at least 20 mm with a relatively low density of 25-30 kg/m³. This is another competitive advantage of FAP's foamed polymer processing technologies. FAP's extrusion lines can produce physically foamed polyethylene sheets from 1 mm to 30 mm on a single extrusion line, while multilayer laminators can simultaneously laminate up to 6 layers of foam, to achieve more than 100mm thickness.

FAP firmly believes that non-cross-linked foamed polymers are the most eco-friendly, cost-effective, and efficient materials for many industries. The company strives to contribute to the further development of this market by creating high-quality lines for the production of foamed polymers, supporting the successful diversification of its customers, discovering new perspectives and production opportunities in alternative niches. FAP takes pride in contributing to a greener world where sustainability is not just a demand but a reality.

Moreover, with a team of highly skilled professionals and specialists across design, process, and assembly departments, the company often works with projects that extend beyond their core sector. In these cases, FAP diversifies machines, allowing to meet unique demands.

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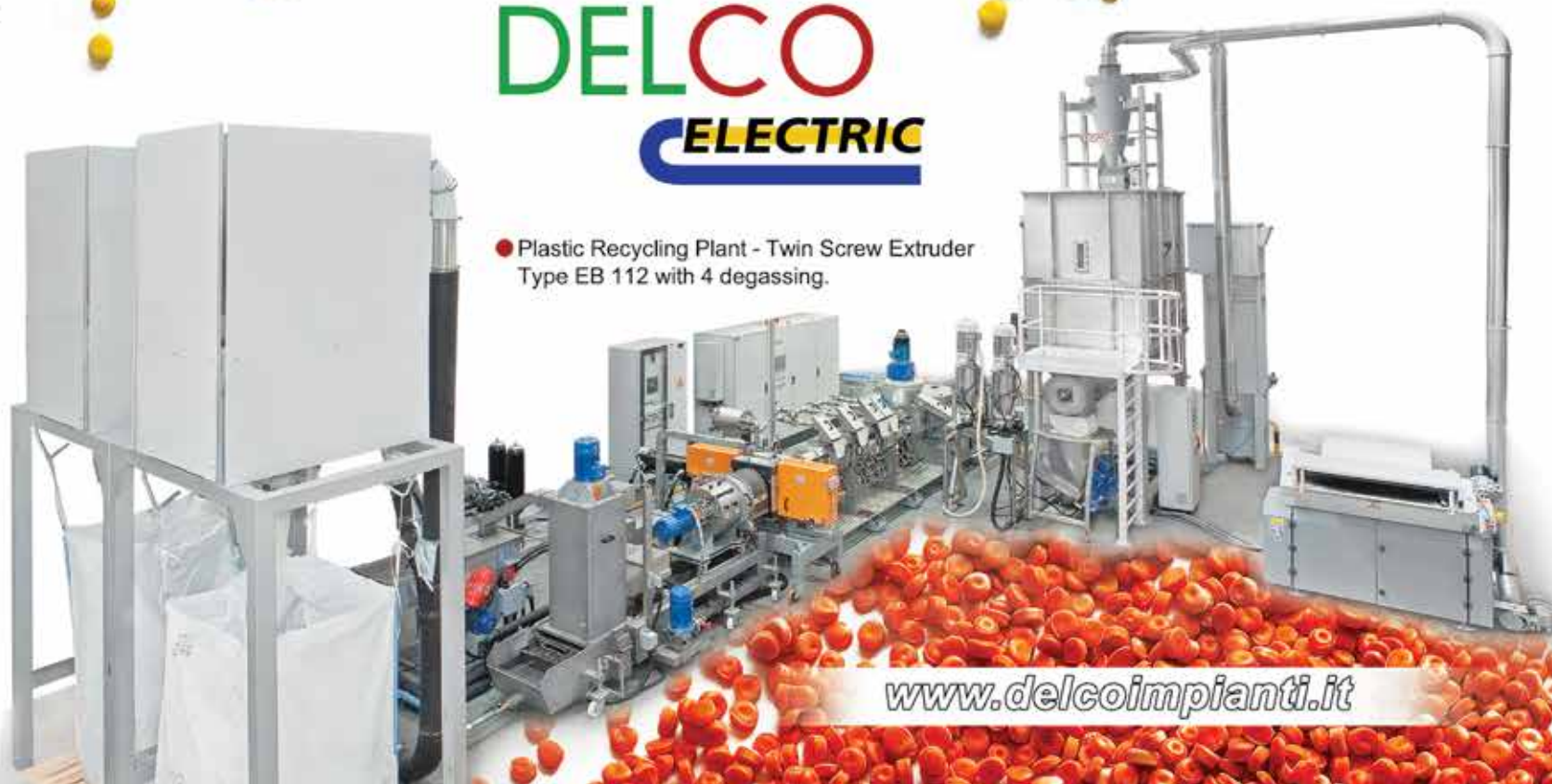


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New Labtech extrusion lines for 3D filaments: meeting a growing market demand

High-speed and compact solutions with a focus on sustainability and the medical industry.

The global demand for three-dimensional (3D) printing continues to rise significantly, with forecasts predicting further growth in the coming decades. By 2027, the market for 3D printing filaments is expected to reach approximately \$1.8 billion. 3D printing offers numerous advantages, including ease of processing, sustainable and efficient production, and reduced time from concept to production compared to conventional methods.

Among the most used materials in 3D printing, especially for fused deposition modeling (FDM) technology and rapid prototyping, are ABS and polyamides. However, with the increasing demand for 3D printing in both industrial and hobbyist sectors, there is a growing interest in eco-friendly materials. Supported by the principles of the 6Rs (Reduce, Reuse, Recycle, Recover, Redesign, and Remanufacture), the push for green processing is rapidly evolving, and biodegradable filaments such as PLA, PBS, PHA, and recycled materials are gaining increasing attention.

Labtech Engineering, recognized for its innovation in extrusion machinery, offers a range of 3D filament extrusion lines capable of processing not only com-



Extruder	Single-Screw Extruder Type LE25-30/C	Single-Screw Extruder Type LE20-30/C	
Screw Diameter	25 mm	20 mm	
Screw L/D Ratio	30 L/D	30 L/D	
Maximum Screw Speed	300 RPM (optional 200 RPM)	150 RPM	
Motor Drive Power	4.0 kW AC Motor (optional 5.5 kW Vector Motor)	2 kW	
Maximum Barrel Temperature	300 °C (optional 400 °C for High-Heat Version)	300°C	
Multilayer 3D Filament Die			
Filament Diameter	1.75 mm, 2.85 mm (others on request)		
Triple-Chamber Water Bath Type LTCW-150			
Maximum Water Temperature	85°C		
Water Bath Length	3.0 meters per chamber sections		
Rubber Roller Type Haul-Off Unit Type LCAT-130			
Rubber Roller Diameter	100 mm		
Maximum Operating Speed	130 m/min		
Horizontal Filament Accumulator Type LHFA-200			
Maximum Accumulated Filament Length	200 m		
Single-Station Wind-Up Unit Type LWU-130			
Spool Type	RS 200	RS 300 (option)	RS 350 (option)
Spool Diameter	200 mm	300 mm	350 mm
Spool Width	45 mm	65 mm	90 mm
Motor Drive	0.75 kW		
Maximum Operating Speed	130 m/min		

mercial polymeric materials but also recycled and biodegradable polymers. These machines support the recycling of thermoplastic materials and production waste, helping to reduce lead times for filament purchases and deliveries while significantly lowering production costs.

Tailored Solutions for Every Need

Labtech Engineering has developed several 3D filament extrusion options, each designed to meet specific customer requirements:

1. High-Speed 3D Filament Line: This advanced line allows for production speeds of up to 130 m/min and is designed for resins such as ABS, PA,

TPE, PETG, PLA, and recycled plastics. Ideal for large-scale production, it is perfect for operations requiring continuous running, 24 hours a day, 7 days a week. With a 40 mm single-screw extruder and the option of accessories like a drying hopper or a “rainbow hopper” for producing rainbow-colored filaments, this line is highly efficient. Its compact size (only 10.5 meters in length) makes it easy to integrate into various workspaces. Equipped with a horizontal filament accumulator and a CE-compliant winding unit, it offers a storage capacity of up to 200 meters of filament, simplifying the spool change process.

2. Compact 3D Filament Line: A smaller and more versatile solution compared to the high-speed line, Labtech’s compact version is ideal for limited spaces and can be operated by personnel with little experience in filament production. Capable of producing filaments from various materials at speeds up to 15 m/min, this line features a 20 mm or 25 mm single-screw extruder, with a cooling and winding system mounted on a cabinet. The cooling bath is divided into two sections—one for hot water and one for ambient water—ensuring gradual cooling and optimizing the mechanical properties of the filament. Also available for two-layer co-extrusion, this compact line is perfect for small-scale projects, research and development, or universities, allowing new solutions to be tested using minimal material, reducing operational costs.

3. Medical-Grade 3D Filament Line: Designed for the pharmaceutical industry and the processing of medical-grade materials, this line is equipped with



Technical Data for Pharmaceutical Modular 12 mm Twin-Screw Micro-Compounder Extruder Type LTEP 12-40

Diameter of screws	12 mm
L/D Ratio	40
Screw Speed Range	0 to 800 RPM
Motor Power	2.0 kW
Outer and Inner Screw Diameter Ratio	1.45 (D/d)
Maximum Barrel Temperature (Standard)	300°C
Heating Power for Strand Die	0.6 kW
Approximate Maximum Output (LDPE)	4 kg/hr
Dimensions (L x H x D)	1.4 m x 1.5 m x 0.63 m

a 12 mm pharmaceutical twin-screw extruder and a downstream unit similar to that of the compact 3D filament line. This line complies with GMP standards for processing medical materials, making it ideal for producing filaments for medical applications.

Precision Filaments for Every Printer

All Labtech lines are designed to produce filaments with precise and consistent diameters, typically 1.75 mm or 2.85 mm, but can be adapted to other sizes upon request. This ensures compatibility with most 3D printers available on the market.

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Recycling & Defossilization: FKUR presents its bioplastic and recycled solutions

Recycled Macolen and biobased Terralene compounds in focus: a wide range of sustainable plastics for recyclable packaging. The solutions range from biobased bioplastics to recycled plastics and hybrid compounds (bio + recycled).

Under the brand name Macolen®, FKUR showcases high-quality PP recycle compounds sourced from post-consumer and pre-consumer materials. These modified recycles match virgin plastics in odor and technical properties. Customers can choose from various injection molding and profile extrusion grades. In addition to non-reinforced types, FKUR also offers two variants with talcum reinforcement (20% + 40%). Macolen® compounds are suitable for diverse non-food applications.

Terralene® rPP is a product family of hybrid compounds based on polypropylene (PP), combining the ecological benefits of recycles and biobased materials with excellent recyclability. Depending on the product grade, recycle content ranges from 30% to 60%, sourced from post-consumer waste streams, with a biobased content of up to 33%. The drop-in product range of Terralene® rPP, known for its good flowability and natural granule color, is currently limited to non-food applications. Especially in food packaging, there are still hurdles and regulatory uncertainties regarding the use of recycles. For manufacturers looking to make their products more sustainable today, FKUR's biobased, highly recyclable drop-in bioplastics from the Terralene® family are the ideal choice. Terralene® bio-compounds are based on polyethylene (PE) from renewable resources. All Terralene® granules are 100% recyclable and can be processed through injection molding, blow molding, and film extrusion.

High-quality, EuCertPlast-certified PE and PP recycles

In addition to its own recycle and hybrid compounds, FKUR presents a broad distribution portfolio of EuCertPlast-certified PE and PP recycles for injection molding, blow molding, and extrusion.

FKUR is steadily expanding its portfolio of traded recycles. "We are already in discussions with promising recycling companies. Our customers

know and expect the highest quality and reliability from FKUR, which is why we are committed to strong, sustainable partnerships in recycles. Particularly in the technical thermoplastics sector, we aim to strategically complement our portfolio," emphasizes Patrick Zimmermann, Managing Director of FKUR Kunststoff GmbH.

FKUR is EcoVadis Bronze certified

FKUR also showcases various facets of implementing a circular economy. Together with customers, concepts are developed to close loops and minimize the use of fossil resources.

To transparently demonstrate its efforts towards sustainability in the plastics industry and ensure compliance with international best practices and standards, FKUR has obtained EcoVadis certifica-

tion.

FKUR achieved a Bronze rating in the sustainability ranking right away. This places FKUR among the top 35% of companies evaluated by EcoVadis in the manufacture of plastics and plastic products industry globally.

"Our interdisciplinary sustainability team has done a fantastic job. We are proud and happy about this evaluation. This certification reaffirms our role as a driver of sustainable transformation in the plastics industry and validates our comprehensive commitment to sustainability," emphasizes Carmen Michels, Managing Director of FKUR.

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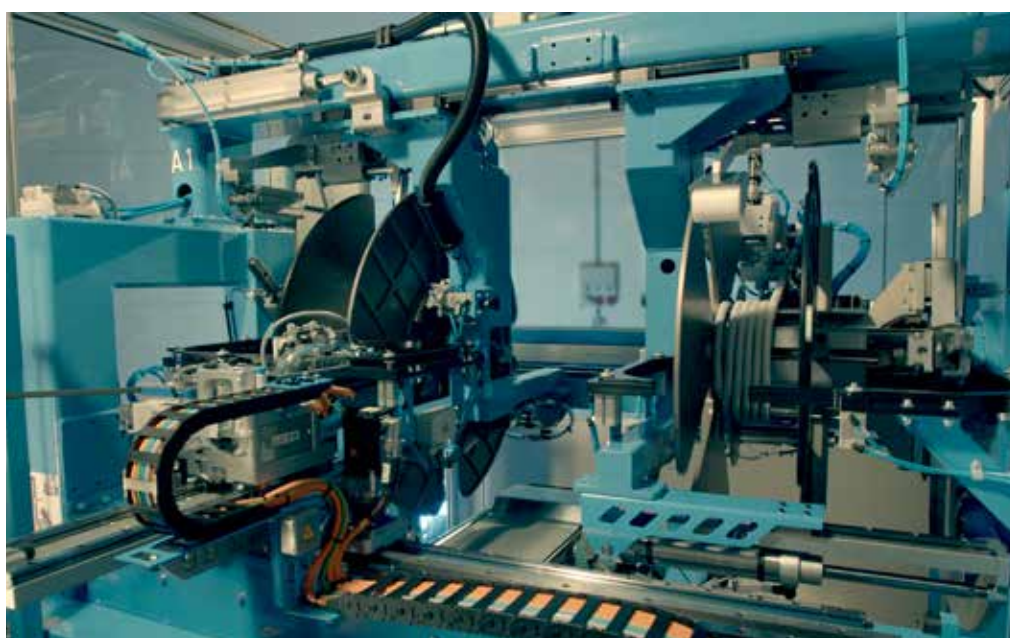
Campetella Robotic Center revolutionizes production efficiency with cutting-edge automation

Boosting efficiency with tailor-made coiling and palletizing technologies.

Campetella Robotic Center boasts a centuries-old history involving five generations of the Campetella family, whose core business lies in designing and manufacturing both standard industrial robots and complex automation systems for the plastic injection molding field and coiling of flexible pipes. The company's mission is to build strong and solid partnerships to guide and support their customers throughout the automation of their production processes. Campetella relies on a partner network spread worldwide, ready to assist their clients every step of way, from initial consulting to after-sales assistance.

Campetella's SCARA robots, on display at Fakuma this year, are extremely fast and agile, perfect to perform Pick & Place and Palletizing operations. At the show they will pick 400 ml cups of different artworks from a box in a random order, sort them according to the artwork with the help of a vision system and finally neatly stack them. At specific times of the day, visitor will get hand-outs. The Campetella robots are also hosted by their partners Toyo Europe, booth A5-5208, and KT-Sakkas, booth B1-1218.

At Toyo's the Campetella best seller GS2 X-Se-



ries, well-known for its record-breaking speed and accelerations, will perform the high-speed take-out of fruit crates from a SCS mold, whereas at KT-Sakkas' their new top-entry CX0 X-Series, born to fit small tonnage IMMs, will work hand in hand with a JSW 100-ton IMM.

Campetella Robotic Center: tailor-made solutions for the extrusion market

Partnership is the key element and the sine qua non at the base of each project the company undertakes. Besides offering a wide range of standard automation solutions to choose among, Campetella uses them as a modular and configurable starting point to develop winding solutions, tailor-made for and with their customers to satisfy their most different production needs. The company aims to establish a solid cooperation with its customers, based on the importance of sharing the mutual know-how to create the most suitable solution to the customer's specific production processes.

Campetella Robotic Center boasts decades of experience in the design and production of coilers for the extrusion of flexible pipes. A passion born in 1983 and never extinguished, which today makes it possible for the Campetella automation to meet extrusion in order to provide the industry 4.0 market with an all-in-one and at once customized offer. The company's proposition is wide and aimed at increasing the productivity of those who benefit from it by optimizing their processes, always keeping a keen eye on the op-



erators' safety.

Machines are designed for either rapid manual or automatic setting of the reel format in such a way as to allow maximum configurability and flexibility depending on the specific production needs. Furthermore, the strapping units have been thoroughly designed, to avoid wear, as well as optimized with brushless servomotors to increase programmability and get maximum control, while reducing the binding cycle time and avoiding any potential damage to the hoses and pipes.

The peculiar configuration of the Campetella's coiling platforms aims at optimizing the customers' plant layout by reducing the footprint on the ground and by giving them the possibility to choose between the lateral or the rear exit of the coils, depending on the production floor space availability.

A great added value is given by the end-of-line customization. Thanks to the synergy between the coiler and the robot in charge of palletizing and / or handling the finished coil, Campetella provides its customers with a complete package that exceeds the mere winding process, ranging from final packaging to end-of-line coil handling systems for a turnkey solution aimed at optimizing not only the entire process, but also the customer's investment.

For instance, SCARA robots are the perfect choice when it comes to palletizing. Their integration is highly recommended as they can provide:

- Long Vertical stroke with minimum footprint



on the ground

- Maximum dexterity and flexibility with its 5 axes and free programming
- Either Palletizing or boxing of coils coming from more lines

The Campetella team's commitment and dedication comes not only from their being passionate about their work, but also from believing that the customers' success is their own success, resulting not only from their experience and professionalism in the design and implementation of the right automation, but also from an effective, efficient and timely after-sales assistance.

The global, digital and interconnected assistance network ensures a widespread presence and constant operation, always and everywhere, thus guaranteeing prompt and targeted intervention,

besides including a wide training program. From the initial consultation to the after-sales assistance, Campetella Robotic Center ensures constant presence and support, thus turning from a pure supplier into a real partner.

Meet GYRE 800

The coilers designed by Campetella are aimed at revolutionizing the way manufacturers handle coiled products by enhancing efficiency, reducing downtime, and optimizing production.

Gyre 800 is a coiler with two parallel reels, created for high-speed winding and packing of reels with an external diameter up to 800 mm. Its innovative automatic regulation system, that adapts according to the internal diameter and width of the coil, is aimed at offering the highest level of precision and flexibility with different





coil formats.

This machine is Ideal for the following types of pipes:

- Smooth HDPE
- Corrugated PE
- Smooth /corrugated/spiral PVC
- Rilsan
- Braided
- Reinforced for oleodynamics
- External diameter of the reel: max 800 mm
- Internal diameter of the reel: 200 - 360 mm
- Width of the reel: 90 - 250 mm
- Strapping unit and brushless servo motors
- Footprint on the ground: 3360 (length) x 2150 (width) mm

Space-Saving Design

The machine is compact and wisely designed to maximize floor space. Its optimized layout ensures seamless integration into existing production lines, allowing customers to make the most out of limited space.

Premium construction quality

Attention to detail and strict production quality standards makes their coilers sturdy, reliable and



ready to give flawless performance for many years to come.

Reduced Maintenance and Optimized Energy Consumption

Maintenance costs can eat into production budgets. The solution designed by Campetella minimize this burden as it requires less frequent maintenance thanks to its robust construction and smart engineering. The fixed position of the reels, with no slip rings, avoids moving the reel. As a result, the machine is subject to lower wear and needs less maintenance.

Perfect Manipulation of the Coil End

Precision matters when handling coiled materials. Gyre 800 excels at precisely positioning the coil end. Such accuracy maximizes coil quality and shape, thus preventing production hiccups.

Non-Stop Winding During Coil Strapping

The Gyre 800, while wrapping the coil with straps on one reel, keeps winding operation up on the other reel, and vice versa, thus optimizing productivity and allowing non-stop production.

Gentle and Controlled Ejection of the Packed Coil

Their coiler takes care of reels by handling them with a soft touch. Thanks to the CNC control and brushless servo motors, each movement is smooth and controlled, thus preventing the reel from being accidentally scratched or marked. The reel is then eased down on the integrated conveyor belt, which is placed at an ergonomic height.

High flexibility thanks to the configurable reel unloading side

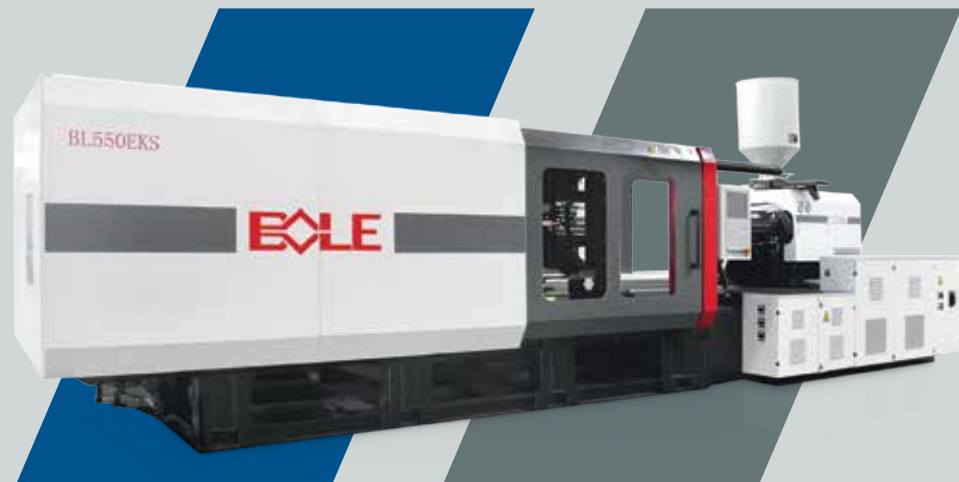
Three different unloading sides are available, right, left or rear, to meet specific requirements of production plants.

Intuitive and optimized software

The control system results from the experience Campetella has been gaining while designing and producing robots. In fact, both their coilers and robots share the same CNC motion controller and brushless servomotors. The software has been conceived and optimized to offer the best user experience. The 15" touch display of the interface allows to easily control and monitor the entire process.

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NASA used AURUM® to study insulation for electric engines in aerospace

High-temperature electrical insulation solutions for next-generation aerospace engineering.



BARplast provided the thermoplastic polyimide AURUM® that has been tested by NASA. The researcher of the NASA's Glenn Research Center in Cleveland, Ohio, tested thermoplastic Polyimides that demonstrated interesting properties, making it a candidate for the electrical wiring requirements for future aerospace transportation technologies. In a NASA White Paper presented at the SAMPE conference in May 2024 the researcher points out

that there are: "electrical wiring requirements for next-generation air and space transportation engineering designs, with continuous operation temperature requirements of up to 200°C ...". The objective of this study was to assess the potential of thermoplastic polyimides as a high-temperature electrical insulation solution. Furthermore, the white paper highlights the need of: "thermoplastic electrical insulation materials systems to improve thermal management in high

power density electric motors..." and it states that "a melt processable PI with high service temperatures is of interest as an electrical insulation candidate material. Additionally, melt processing enables facile dispersion of fillers within a polymer matrix which can impart additional functionality such as thermal conductivity...".

About AURUM®

AURUM® is a semicrystalline TPI suitable for powder coating, injection molding, and extrusion coating, with the highest glass transition temperature in its class. The extrusion processing of AURUM® for wire insulation is highly economical, allowing for extremely thin layers and offering high elasticity as well as good compatibility with cooling and lubricating oils.

AURUM® is produced by Mitsui Chemicals Inc. and sold by BARplast in the USA and BIEGLO in Europe, has one of the highest glass transition temperature (Tg) of 245°C (473°F) of any commercially available thermoplastics.

BARplast is a subsidiary of the BIEGLO Group, a distributor of high-performance plastics based in Hamburg, Germany. With over 10 years of experience, BIEGLO serves a wide range of industries, including aerospace, automotive, electrical, and more.

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l.biesterfeld@bieglo.com

BIEGLO @ Fakuma 2024: hall A4- Booth 4002





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Designed & Manufactured in Italy



NEW AUTOMATIC DOSING SYSTEM

FOR PIGMENTS AND ADDITIVES MATERIALS



REPEATABILITY



ACCURACY

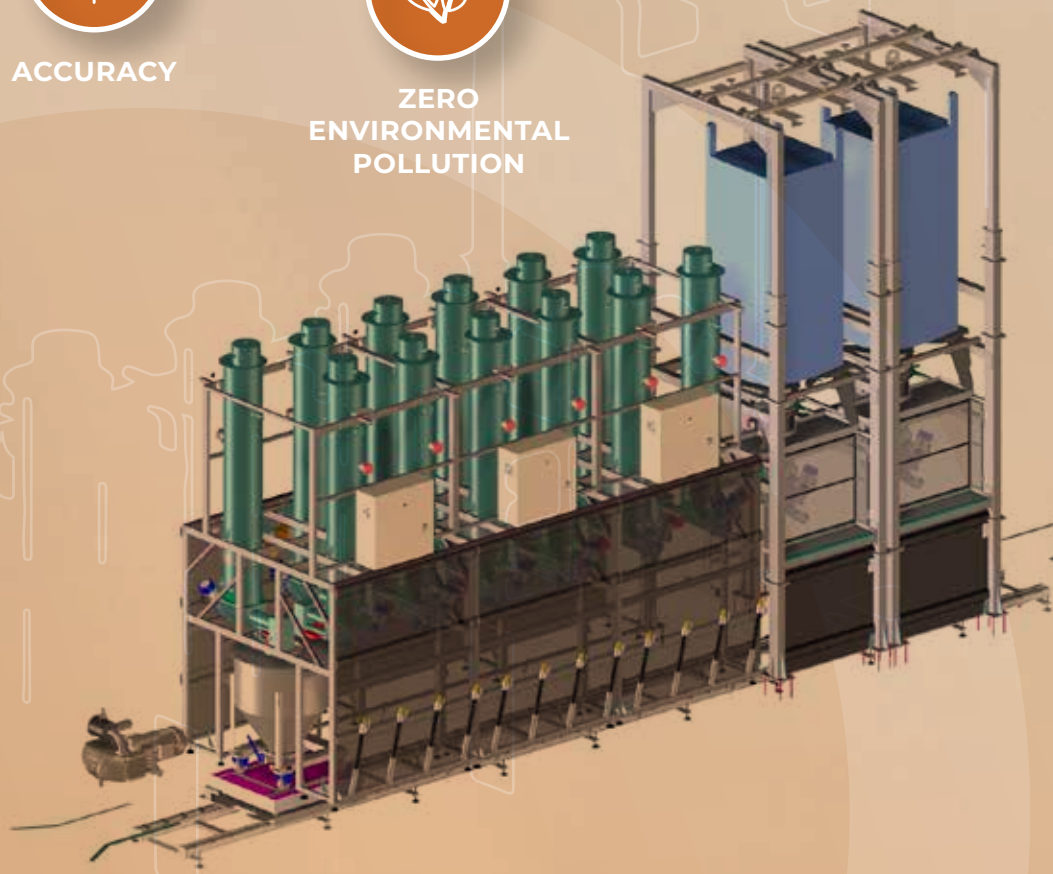
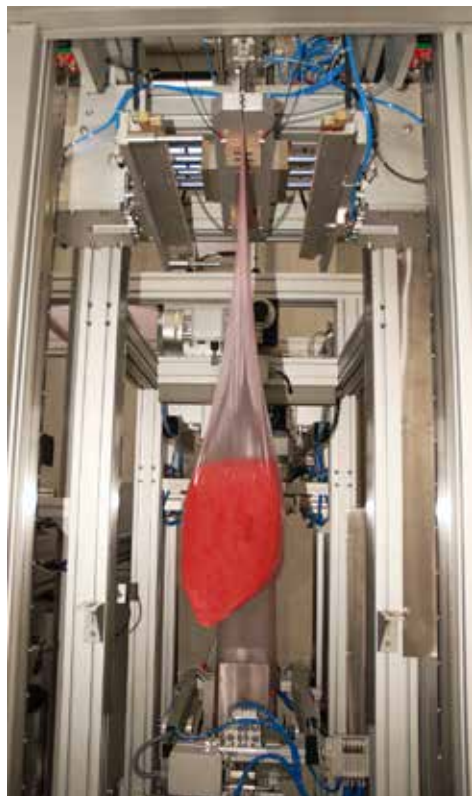


ZERO ENVIRONMENTAL POLLUTION



TRACEABILITY

AUTOMATIC BAG MANAGEMENT



SCREW FEEDER DOSING

DOSING DIRECTLY INTO THE CONE





Gimatic: innovation and foresight driving industrial automation

Born from a passion for innovation and entrepreneurial spirit, Gimatic has established itself as a global leader in the production of grippers and components for industrial automation.

Gimatic with its nearly forty-year history is deeply intertwined with the technological evolution of the industry, characterized by a constant commitment to research and development and a keen focus on customer needs.

At the heart of our company philosophy is the relentless pursuit of solutions that enable our customers to achieve more from their machinery and production processes. Gimatic aims to maximize efficiency, durability, and precision in automated processes, while minimizing waste.

End-of-Arm Tooling (EOAT), including our extensive range of grippers, is a prime example of this approach. By combining a vast array of components, Gimatic creates custom grippers tailored to any robot or automation system. Our EOATs ensure the safe and efficient handling of any product, seamlessly integrating into production cycles and enabling finishing and assembly operations. Gimatic's offering is distinguished by its completeness and reach, thanks to a global network of branches and two local technical competence centers. This global presence allows us to provide impeccable customer service and promptly address the specific needs of each customer.

Among the latest products developed in-house at Gimatic are the QCG and QCK tool changers. The QCK75 tool changer maximizes flexibility and works seamlessly with both automatic and manual tool changing systems. The innovative spring-loaded mechanism on the robot side (QCK75-A) not only improves performance but also contributes to a more cost-effective solution. This compact unit boasts a slim profile of just 43 mm in total thickness, making it ideal for space-constrained applications. Built to handle loads up to 20 kg, the QCK75 offers robust and reliable performance.

Gimatic's QCG63 redefines the concept of robotic tool changing with its innovative design. It requires no additional power for automatic coupling and decoupling, eliminating the need for external electrical or pneumatic sources during these operations. This tool changer boasts a payload capacity of 50 kg.

Both tool changers can be used in both automatic and manual modes and can be easily integrated

onto numerous robots and cobots.

With its focus on innovation, quality, and customer satisfaction, Gimatic is the ideal partner for companies seeking to optimize their industrial automation processes and achieve new levels of market competitiveness.

www.gimatic.com

Booth A7-7204



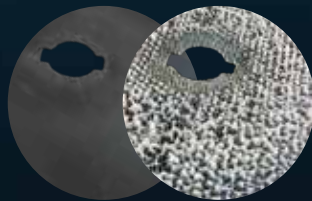


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Mixaco: a legacy of innovation in industrial mixing

Transforming plastics with precision: MIXACO's cutting-edge container and heating/cooling mixers for unmatched quality and efficiency.

Mixaco has been a pioneer in the field of industrial mixing technology for over five decades. The company's innovative approach and high-quality products have had a notable impact on German companies and the global market. Founded in 1965 in Neuenrade, Germany, the company has consistently pushed the boundaries of innovation, setting industry standards with its cutting-edge mixing solutions. Mixaco's journey began with the development of the first container mixer, a revolutionary concept that transformed the way materials are mixed in various industries.

Over the years, Mixaco has expanded its product range to include a variety of mixers designed for different applications, from plastics and chemicals to food and pharmaceuticals, batteries. The company's commitment to quality and innovation has earned it a reputation as a leader in the mixing technology sector.

The foundation of Mixaco USA: expanding horizons

Mixaco USA was established as part of Mixaco's strategic initiative to expand its global footprint and better serve its growing customer base in North America. The foundation of Mixaco USA, in the early 2000s, marked a significant milestone in the company's history, reflecting its commitment to providing innovative mixing solutions and exceptional customer service across the globe. The U.S. has always been a hub for technological innovation and industrial growth. By setting up operations in the U.S., Mixaco aimed to leverage



In front of one of MIXACO's Container Mixer Multitool, Markus Frantzen (General Manager USA), Matthias Töle (CEO and Managing Director) and Andreas Backhaus (Sales & Procurator) discuss before starting a Mixing Trials for one of their clients.

this environment to further enhance its product offerings and stay ahead of industry trends.

Exploring MIXACO's mixers for plastic applications

MIXACO Maschinenbau, leading company in the field of industrial mixing technology, is renowned for its innovative mixing solutions, particularly in the plastics industry. The company offers a wide range of mixers, including Container Mixers (CMs) and Heating/Cooling Mixers (HM/KM), which are designed to meet the high demands of plastic production.

The company's container mixers are designed to handle a variety of raw materials and applications, ensuring efficient and high-quality production. MIXACO's container mixers are highly flexible and can handle various raw materials. These mixers can process materials such as POM, PP, PTFE, WPC, EPS, PVC, and more. They optimize results in various applications within the plastics industry, including:

Masterbatches: ensuring uniform distribution of pigments and additives.

Compounding: creating homogeneous mixtures of different polymers and additives.

Additives: incorporating stabilizers, colorants, and other additives to enhance the properties of plastic products.

Here's an overview of the different types of container mixers MIXACO offers for plastic applications:

The Container Mixer Multitool™ is ideal for temperature-sensitive raw materials. This mixer minimizes heating during the mixing process, preventing materials from sticking to the tools or container. It is versatile and can handle a wide range of raw materials and recipes. Available in sizes from 50 to 2000 liters, it is perfect for various plastic applications.

The Container Mixer Vortex™ is designed to heat raw materials during mixing. The vortex formation ensures optimal mixing results, making it suitable for plastics, rubber, chemicals, pet food, building materials, and colors & powder coating. This mixer is particularly effective in applications where heating is required to achieve the desired material properties.

The CM i4 fleX mixer is highly flexible, supporting



Part of the company's production team in the plant in Neuenrade, right in front of the High Intensity Mixer and right in the middle of two Heating Cooling Mixer models.

different container sizes. This flexibility makes it ideal for frequent recipe changes. It offers both horizontal and vertical mixing, high throughput, and fast processing with short cleaning times. This mixer is suitable for various industries, including plastics, where efficiency and adaptability are crucial. It supports different container sizes and reduces cleaning times, making it versatile for multiple plastic applications. This mixer is designed to handle a wide range of materials and ensure consistent mixing quality.

MIXACO's Heating/Cooling Mixer are designed to provide precise temperature control during the mixing process. It is the optimal solution when it comes to demanding mixing tasks. It guarantees fabulous product preparation in heating and high efficiency in cooling performance. This is crucial for achieving the desired properties in plastic compounds. These mixers are particularly useful for applications that require the incorporation of stabilizers, tracers, and colorants.

MIXACO provides free consulting services and Mixing Trials to optimize the mixing processes of clients. The experts analyze the current processes and offer tailored recommendations for improve-



Heating/Cooling Mixer



One of MIXACO's Production department member, adjusting one of the tools of the model Container Mixer 2000 Multitool. An innovative and patented technology with multiple mixing motors and new tools enables highly flexible mixing processes of the Multitool™ container mixer. A special arrangement of the mixing tools prevents the materials from heating up and sticking to the tools, the mixing head and the container.

ment. MIXACO's innovations have significantly improved the efficiency, flexibility, and quality of mixing processes in the plastics industry. The company's commitment to integrating advanced technologies and developing energy-efficient, customizable solutions has made them a leader in the field and trusted partner for many companies in the plastics industry. Whether it's through Industry 4.0 integration, flexible container mixers, or precise heating/cooling systems, MIXACO continues to set new standards in mixing technology.

www.mixaco.com

MIXACO @ Fakuma 2024: hall A6 – Booth 6006



Container Mixer i4 flex

Our added value to quality and price:



Speed.



Viplas Produces new and reconditioned screws, twin-screws and plasticization barrels for injection, extrusion and blow molding machines from dm. 40 up to 500; made of special steels: bi-metal, nitrided, tempered and powder steel. The expertise and help of state-of-the-art machines, in addition special material and treatments, contribute to the resolution of problems due to abrasion and corrosion. Viplas thus makes a high-quality product that is closely monitored by specialized personnel available to you.

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Viplas
PLASTICIZING SCREWS AND BARRELS



Innovative screw design: Euroviti's customized solutions for superior injection moulding performance

How Euroviti transformed a packaging challenge with tailored plasticizing units, reducing cycle time and enhancing product quality.

Euroviti, established in 1992, is a leading manufacturer of injection and extrusion plasticizing units. Based in the industrial heartland of Lombardy, northern Italy, it has experienced consistent growth and expansion since its inception while maintaining its core focus: being more than a supplier.

Among the other market players, this company distinguishes itself by offering extensive support to customers in the extrusion and injection processes, not merely as a provider of mechanical parts but also by helping in the selection of materials and aiding everyone in need of optimization of their operations. Enhancing the efficiency of their industrial processes even with the creation of entirely customized plasticizing unit designs



in a client-focused approach that has fostered long-lasting relationships with numerous customers and business partners worldwide.

One of the latest examples of a successful project involved a Japanese injection moulding machine from a leading international packaging company. The issue arose with transparent pieces produced using a sandwich-type mould and an original plasticizing unit equipped with a barrier screw for processing polypropylene (PP) which, due to contractual obligations, was mixed with a 1.5% clarifying additive needed to ensure excellent transparency of a globally recognized sweet box cover. The moulded pieces had whitish streaks and veins, making the product unacceptable and compromising the look of the packaging. The challenge was to remove them.

After a thorough analysis of the original screw design and production cycle time, Euroviti technical team implemented a comprehensive design overhaul. While competitors or the OEM itself were suggesting to entirely replace the plasticizing unit, Euroviti focused exclusively on redesigning the screw which led to more efficient and cost-effective solution. The modification of the barrier shearing gates, the pitches adjustment, and the addition of a mixing area result in the creation of a customized HPB-mixing design, tailored to address the client's specific issues. Elimination of product non-compliance due to streaks, securing that the moulded pieces met the required quality standards, and enhancing transparency levels with a visually appealing and flawless product were all achieved. Moreover, this solution, along with proper machine settings, allowed a 30% reduction in feeding time and a 9–11% improvement in total cycle time.

This injection moulding project, as well as many others with single screw extruders, confirms that while addressing the immediate challenge, it is possible to solve and improve other elements. On top of that, it proves there is still a lot of work to be done in educating and convincing about how much of a difference a dedicated and correct screw design can make. Even a small single screw, if made correctly, can make a big difference.

www.euroviti.com

EUROVITI @ Fakuma 2024: hall B3 – Booth 3308



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Arburg at Fakuma 2024

First stop arburgSOLUTIONworld: Consulting and solution expertise.

At Fakuma 2024 in Friedrichshafen, Arburg (hall A3, Booth 3101) will once again be offering an interactive exhibition area: the striking arburgSOLUTIONworld brings together Arburg’s comprehensive consulting and solution expertise in all aspects of plastics processing, and is a space where trade visitors can obtain individual answers to their questions on key topics of the future. Arburg experts will be on hand to offer advice at six sta-

tions around the four-metre-high LED column. There will also be an interesting new exhibition wall with an integrated “transparent” machine, where the company’s digital products and services will be brought to life. Many plastics processors are currently working on making their injection moulding plants fit for the future and competitive. arburgSOLUTIONworld is home to a wealth of knowledge in this area.

“More than a machine”, expert solution provider

The focus of arburgSOLUTIONworld is on productivity increases, efficiency, sustainability, the shortage of skilled labour, and subsidies. Trade visitors will receive valuable suggestions and specific tips on finding the right levers and optimisation potential. For intelligent production solutions that increase efficiency and reduce costs – customised to individual requirements. The company’s “Action Plan: Energy”, which includes energy advice, machine updates and consumption measurements, as well as the Gestica control system with its intelligent assistance and pilot functions, are useful components for saving valuable resources and energy.

Digital products and services brought to life

Arburg is not only an innovative manufacturer of machines and associated control systems, but also the industry’s number one when it comes to digital transformation. The new exhibition wall will show trade visitors how digitalisation can specifically increase the energy and production efficiency of machines and systems. The centrepiece is a “transparent” Allrounder 270 A injection moulding machine, which provides insights into interesting details, such as the electric drive components of Arburg subsidiary AMKmotion and the IIOT gateway for information technology cross-linking. In addition, four monitor stations will be used to demonstrate the benefits and added value of the ALS host computer system, the arburgXworld customer portal that can be cross-linked with this, the Arburg Remote Service ARS, and Arburg’s after-sales services.

Digital tools: increase efficiency and find smart solutions

IT-networked injection moulding production requires machines to be connected to a manufacturing execution system (MES). Arburg’s own ALS host computer system, version 8.0 of which has been available since spring 2024, offers transparency, improves data quality and reduces machine standstills. As a representative survey has shown, this allows OEE (overall equipment effectiveness) to be increased by more than 26 per cent on average. A very useful AI-supported feature of the arburgXworld customer portal is its new “Ask



At Fakuma 2024, Arburg will once again be bringing together its consulting expertise in the interactive arburgSOLUTIONworld. At six stations around an LED column and along a new exhibition wall with a “transparent” machine, Arburg experts will be on hand to provide advice on topics such as productivity increases, efficiency, sustainability, the shortage of skilled labour, and subsidies.

ARBURG" premium app, which is based on the well-known large language model ChatGTP, but with the advantage of a secure, self-contained environment. "Ask ARBURG" contains very easy-to-access, comprehensive injection moulding knowledge from Arburg and can answer specific questions about machines and processes while also identifying and eliminating the causes of faults.

www.arburg.com

ARBURG @ Fakuma 2024: hall A3 – Booth 3101

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Tel.: +49 (0)7446 33-3463
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presse_service@arburg.com

About Arburg

Founded in 1923, the German family-owned company is one of the world's leading manufacturers of plastic processing machines. The ARBURG family also comprises AMKmotion and ARBURGadditive, including innovatiO.

Its portfolio includes injection moulding machines, 3D printers for industrial additive manufacturing, robotic systems and customer- and industry-specific turnkey solutions. It also includes digital products and services.

ARBURG is a pioneer in the plastics industry when it comes to energy and production efficiency, digitalisation and sustainability. ARBURG machines are used to manufacture plastic products for industries such as mobility, packaging, electronics, medicine, construction and equipment engineering, and leisure.

The company headquarters are located in Lossburg, Germany. In addition, ARBURG has its own organisations at 36 locations in 26 countries and, together with trading partners, is represented in over 100 countries. Of a total of around 3,700 employees, some 3,100 work in Germany while around 600 are based in ARBURG organisations around the world.

ARBURG is certified in accordance with ISO 9001 (quality), ISO 14001 (environment), ISO 27001 (information security), ISO 29993 (training) and ISO 50001 (energy).

Further information can be found at: www.arburg.com, www.amk-motion.com and www.arburg.com/arburgadditive.



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more efficient
systems to
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future
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FAKUMA 2024



15-19 october



Friedrichshafen,
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Stand B2 2218

Fakuma





Oerlikon HRSflow broadens product portfolio with advanced control units and valve gate end rings

Oerlikon HRSflow will introduce the new Valve Gate external End Ring for Tp and Vp nozzle series along with the new End Ring Through the Cavity (TTC) for Tp nozzle series.

These innovations are designed to process engineering polymers such as PA6/PA66, PBT, POM, PPA, and PPS, which are used in technical components like gears and structural parts for automotive, electronics, domestic appliances and other industries. Key benefits include increased wear resistance, reduced material degradation thanks to good process window within

material guidelines that means enhanced flexibility.

T-Flow HRS V-Flow HRS Control Units

Additionally at the booth the thermal T-Flow HRS and sequential V-Flow HRS. The first one delivers accurate thermal control for hot runner temperatures in injection molding while V-Flow HRS

excels in sequential multi-zone control for valve gate nozzles. Main benefits include user-friendly interface and guided operation, multiple communication interfaces to injection molding machines, advanced features to ensure production reliability, built-in troubleshooting and worldwide service technical support.

News for the bucket market

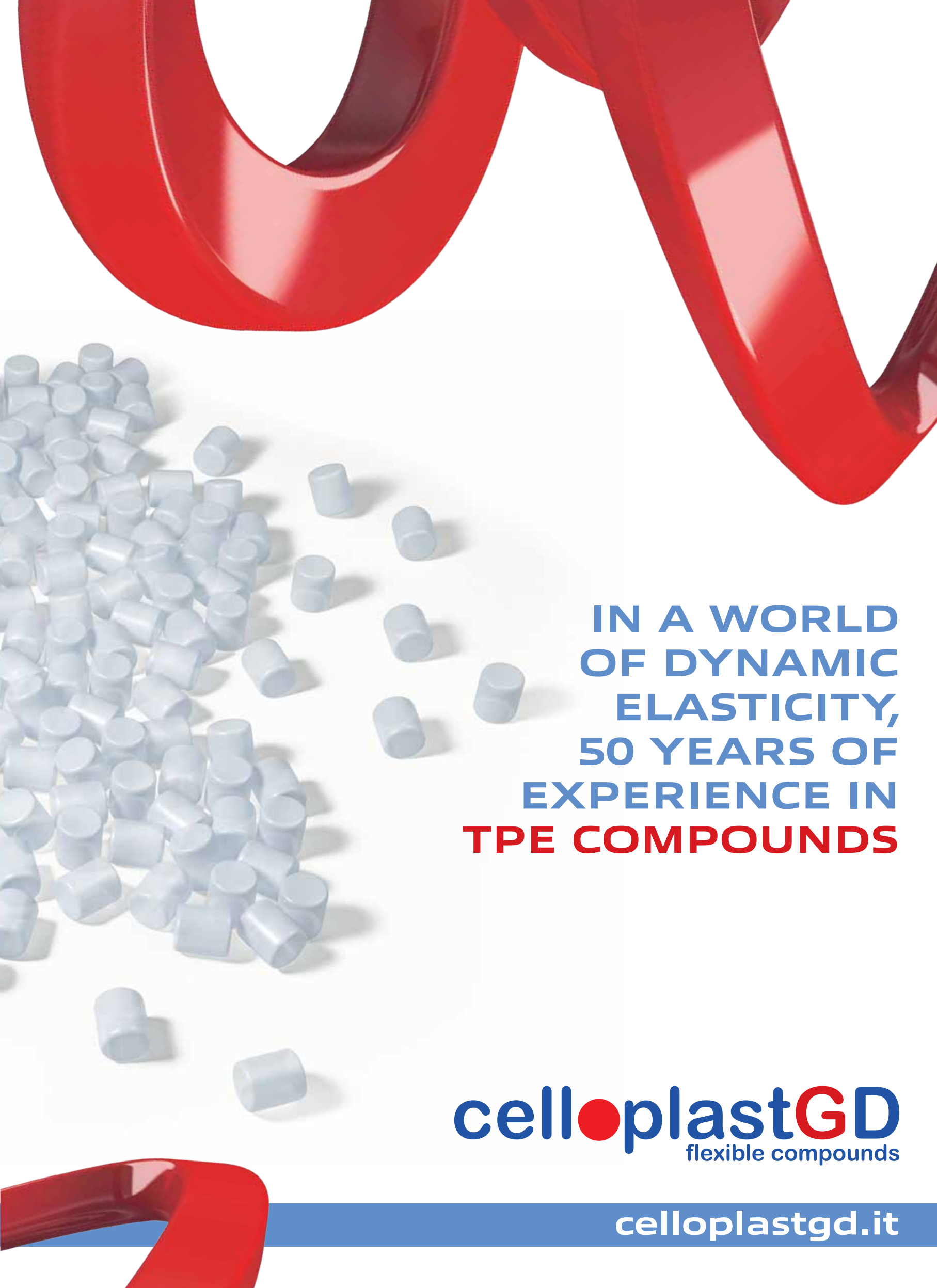
The Xd nozzle series, known for its compact stack mold in thin-wall packaging, is now enhancing its capabilities with a central solution for buckets and pails with handles. It features an actuator between the manifold and the nozzle for precise inlet-nozzle alignment, improving injection accuracy and enabling a more compact design and stack height, which is ideal for space-limited environments.

Additional application areas for the MULTIflow HRS will be highlighted, covering fields such as thin wall packaging, medical, beauty and personal care, beverage and home. The Oerlikon HRSflow multi-cavity line is designed for low shot weight parts (0.5 to 120 grams), offering fast cycle times, high production volumes, consistent part weight, and efficient processing of diverse materials, including PCR compounds and biopolymers.

At BOY booth, Jestar medical demo mold running on BOY 35E injection molding machine will produce a Blood Conical Filter using Oerlikon HRSflow MVP – Multi valve plate technology in combination with 16 drops MULTIflow system Sp series. At HAITIAN booth, the new ZE full electric Injection Molding Machine will produce a cable holder of 1.2 grams. Featuring the Oerlikon HRSflow Sa Series with a 16-drop open gate system, this hot runner configuration is specifically designed to process PA66+30% GF, ensuring flawless part filling and outstanding process repeatability.



www.hrsflow.com
Hall A1, Stand 1215



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Gruniverpal at Fakuma 2024: innovation in lifting systems

Gruniverpal presents its GB 750 and Minidrel 20 SL self-propelled cranes at Fakuma 2024, combining innovation and tradition. Customizable and radio-controlled solutions for maximum efficiency and precision.



Gruniverpal is an Italian company founded in 1954 with a long tradition in manufacturing self-propelled cranes and lifting systems. Over time it has become a reference point in several industries, including plastic molding, tire manufacturing, automotive, aeronautics, and military. The company is known for its ability to combine technological innovation and craftsmanship, and its electric self-propelled cranes are designed to offer customized solutions that meet customers' specific needs. Every detail, from accessories to remote controls, is designed to ensure maximum efficiency and safety. Efficiency that is crystal clear in GT cranes' technicians, highly



trained figures in continuous training in order to implement their knowledge and ensure that each product meets the highest standards, key to the Piedmont-based company's success. This commitment to training allows them to remain at the forefront of the industry and offer innovative solutions to their customers.

Another distinctive aspect is the presence of the third generation of the Tranchero family at the helm of the company. This ensures continuity in the company's vision and values, keeping alive the tradition of excellence and innovation that has characterized the company since its founding.

Be forward-looking is a fundamental element for the company, which is constantly engaged in the research and development of new solutions to meet the needs of an ever-changing market. This commitment to innovation allows the company to offer cutting-edge products and maintain a leading position in the industry.

Customer satisfaction is at the core of Gruniverpal's philosophy. This buyer-oriented approach has enabled Gruniverpal to build lasting relationships and retain a large international customer base.

Love and attention to detail are evident in every GT Cranes brand product. Each stage of the manufacturing process is characterized by meticulous attention to detail, ensuring high standards of

quality and reliability.

Participation in the Fakuma 2024 exhibition is a key opportunity for the company to showcase its innovations and consolidate its position in the European and world markets. The Fakuma is one of the world's most important trade fairs for plastics processing, attracting more than 1,600 exhibitors and thousands of visitors from around the world. Gruniverpal's presence at the fair not only demonstrates its commitment to innovation and quality, but also underscores the importance of remaining competitive in global market. It will be a unique opportunity for visitors to see advanced lifting solutions up close and discuss them directly with the company's experts.

During the event, the company will display its GB 750 and Minidrel 20 SL cranes in Hall A7, slot 7300. Both cranes are machines that stand out for their precision and reliability; they are able to be driven via radio remote control, allowing one person to maneuver them with ease. The configurations presented at the show do not represent all the possibilities the company can offer, as each product is highly customizable to meet specific customer needs.

www.gt-cranes.com

GRUNIVERPAL @ Fakuma 2024: hall A7 – Booth 7300



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The technological evolution continues. We have made the GM Compac Smart.

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Booth B1/307

Be Smart, be Gamma

 **GAMMA MECCANICA**
RECYCLING LINES FOR PLASTIC MATERIALS



Moretto unveils cutting-edge automation technologies at Fakuma 2024

Showcasing innovations in plastics processing with high-performance equipment, precision control systems, and industry-leading solutions.



- Thermodynamics for controlling heat distribution;
- Fluid dynamics with analysis of air and fluid flows;
- Electromagnetism for electromagnetic energy analysis;
- Sound analysis, precision of acoustic impact on devices.

Five novelties

Moretto involves this high technological equipment in the design of its automations. They have been essential in the product development of Flowmatik, KruiseKontrol, X Dryer, X Comb, X MAX, Kasko, and automatic One Wire 6. The challenge goes on with new products such as Gravix DGM 20, Kasko Filterless, X Comb 12, 6050 Hyper Cut grinder and Navigator 9001.

Gravix, high performance doser that elevates precision in micro-dosing: digital electronics, double eyelid shutter device, self-learning for a compact doser with great benefits for customers.



Fakuma, the exhibition for plastics processing industry, will take place in Friedrichshafen (Germany) from 15 to 19 October. An important event for the plastics processors always focused on market developments and looking for new exclusive and competitive solutions characterized by an advanced level of technology and performance. Moretto will be present with several novelties.

Moretto considers fundamental to invest in innovation, research and testing activities to design and develop future-oriented solutions. The laboratory of the R&D department consists in several state-of-the-art instruments such as rheometers for viscosity control, a gas chromatograph for acetaldehyde control, a DSC for crystallinity control, professional sound level meter, fine dust measurement, infrared cameras, professional high-speed cameras (10,000 frames per second), temperature and airflow control, chilled mirror hygrometer for humidity measurement, anemometers and portable testing tools.

In addition, Leonardo, the Supercomputer with a mathematical simulation software capable of calculations of:

- Load-bearing structures such as mezzanines, mechanical strength;

est dryer with OTX (Original Thermal eXchanger) hopper and X MAX, the biggest dryer capable of 20,000 kg per hour suitable for large productions, extrusion and/or compounding guaranteeing constant efficiency. Moretto dryers range consists of 49 models offering a wide and complete product range in dehumidification. X Comb is the latest of 16 patents in drying.

GR 6050 Hyper Cut, a newly designed, low speed grinder will be introduced in the market. A starve feeding granulator suitable for grinding waste pieces, sprues and blowed parts with 15 movable blades. The engine power is transferred on a single mobile blade and three standard fixed blades. The 160-degree grid increases the GR productivity while reducing consumptions. GR 6050 Hyper Cut is 5.0 ready and second to none.



DGM Gravix 20

Kasko Filterless, a system suitable for plastic granules and/or regrind conveying with the same performance as a filtered system, while avoiding maintenance and filter cleaning.

X Comb 12, the smallest dryer in the market has a constant performance, -50 °C Dew Point, and very low energy consumption. Moretto offers the small-



GR 6050



X Comb Installation

Navigator 9001, a control system developed by Contrex, a company of Moretto group, for blown film production. It is 5.0 ready allowing film production to start automatically in just 5 minutes compared to 25-30 minutes required by conventional automations available on the market. Navigator 9001 ensures double-digit energy savings for film production.

MOWIS, a proprietary supervision platform that simplifies the management of complex systems and provides an immediate view of the plant status for maximum benefits in terms of productivity, traceability, elimination of human error, and optimization of production costs.

To enhance the after-sales service, an interconnected control room ensures remote assistance of the more than 2,200,000 units already installed worldwide. With 115,000 machines produced each year, Moretto is a short supply chain company that manufactures more than 75% of its components in-house in adherence to Smart Factory 4.0 criteria.

Many other exclusive technologies dedicated to the plastics processing industry will be on display at the exhibition. Products with high technological content capable of raising the quality standard, increasing production efficiency and energy savings of the supplied systems.

www.moretto.com

MORETTO @ Fakuma 2024: Hall B3 – Booth 3208



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HALL A1
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EIDOS: THE NEW REFERENCE IN HEAVY GAUGE VACUUM FORMING

1

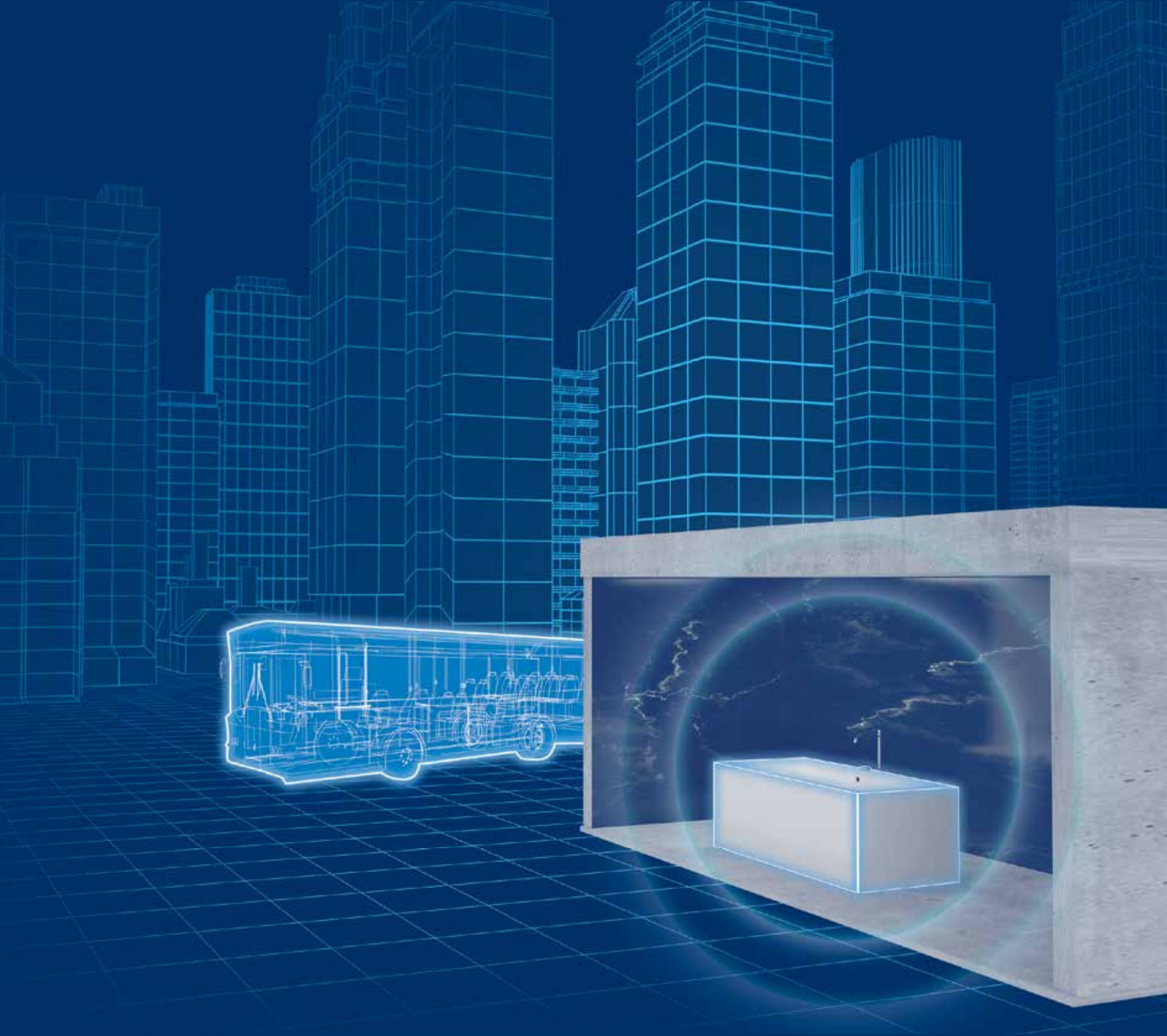
**+151% MECHANICAL STABILITY OF THE FRAME/PLUG ASSIST
STRUCTURE FOR MAXIMUM LEVELS OF MACHINING PRECISION**

2

**-31% TIME NEEDED TO COOL THE PRODUCED PIECE THANKS TO THE
NEW FAN SYSTEM WITH PROGRAMMABLE MOBILE DRAWHOLES**

3

**-53% IN LEARNING TIMES WITH THE NEW CMS THERMO ACTIVE
SOFTWARE**





Filtec: the origin, the product offering, the strengths

The key word? Customization



Gianfranco Baracco

Founded by the Baracco family, Filtec is an Italian company active for over 30 years in the sector of filtration and granulation of plastic materials. Gianfranco Baracco, the founder, thanks to his consolidated experience in the thermoplastic automatism sector, has been able to combine passion and competence to create an innovative and dynamic company since its early years. After over twenty years at the helm of the company, the lead has passed to his son Giovanni, who, together with his collaborators, continues to drive Filtec with the same determination and vision as his father. Among the key collaborators stands out Maria Elena Veronese, Sales & Marketing Director, Giovanni's right hand in many operations. With over 5,000 m² of factories and an approach that encourage craftsmanship and Made in Italy

quality, Filtec is not just a manufacturer of machinery, but a reliable partner for its customers, offering tailor-made solutions and guaranteeing constant performance over time. Today the company offers a complete range of machinery for the granulation and treatment of plastics. Among the best-known products are the Underwater Pelletizer (UW), with a fully immersed cutting system, and the Water Ring Pelletizer (GRO). These systems are appreciated for their versatility and ability to process a vast selection of thermoplastic materials, from masterbatches to compounds, and from glues to the most common polyolefins. In addition to these, Filtec's production also includes vibrating screens, horizontal and vertical centrifuges, screen changers and water filtration and cooling systems. Thanks to this wide offering, Filtec responds effectively to the different needs of the market, guaranteeing systems tailored to customer needs and therefore highly customizable based on specific production needs.

Without doubts this great capacity for customization and craftsmanship represents one of the key factors of Filtec's success. The attention to the customer covers all phases of the project, also involving him in the creation of the entire system, starting from the study of the solutions that best suit his needs. This elasticity in customization allows Filtec to maintain a competitive advantage in the long term, making it a complete, responsive and efficient supplier.

Aware of the importance of managing external relationships in an effective and virtuous manner, over the years Filtec has implemented a multi-



Underwater Pelletizer

lingual Help Desk system that facilitates relationships with customers from all over the world. This service allows the company to manage all requests for assistance and spare parts in a timely manner, thanks to a dedicated management system and excellent warehouse organisation. Finally, the company's investments in new technologies are also in this direction to keep its systems at the cutting edge. The adoption of advanced software and integrated CRM systems allow a virtuous organization in sales and purchases, while ensuring a high level of quality and reliability of performance.

Filtec: virtuous model in the culture of recycling plastic materials and equal opportunities

Alongside its activity as an industry leader, Filtec has been for years a virtuous model in the field of environmental sustainability and plastic recycling. The company is an official partner of the European project "Are you R", aimed at raising awareness among the world's population of the importance of recycling plastic materials. Thanks to its cutting systems, Filtec actively contributes to the recycling chain. The plastic pellets obtained by Filtec customers with these cutting systems are reused to create new products, thus reducing the dispersion of plastics into the environment. At the same time, the Italian company is also committed to the recognition of equal opportunities through involvement in Women in Plastics, an Italian community founded last year by women active in the plastics sector. The activities of



Vented vibrating screen

the group, in which Mrs. Maria Elena Veronese participates, aim to highlight women active in a field still too often considered "for men" and have brought (and will continue to bring) a breath of fresh air and opportunities of exchange in the sector, creating training and information opportunities from which Filtec will also benefit.

Expanding into new markets. Upcoming Filtec events

Filtec exports its Italian craftsmanship worldwide and is always working to adapt and improve its services and products for an international market. To strengthen this position of global actor Filtec participates in international events and trade fairs. In particular, the company in this last year is focused on the next goal: to expand and consolidate its position in the Middle East market. To achieve this goal Filtec has decided to exhibit in two important events. The first one is the PRS Middle East & Africa in Dubai from 10 to 12 September at stand P406. It is a three-day exhibition and conference, the only event in the region dedicated specifically to plastics recycling. The second one is Plast Eurasia in Istanbul from 4 to 7 December, where Filtec will exhibit at stand 1105A - Hall11.

In addition, Filtec has confirmed again its participation in the 2024 edition of Fakuma in Frie-



Giovanni Baracco & Maria Elena Veronese

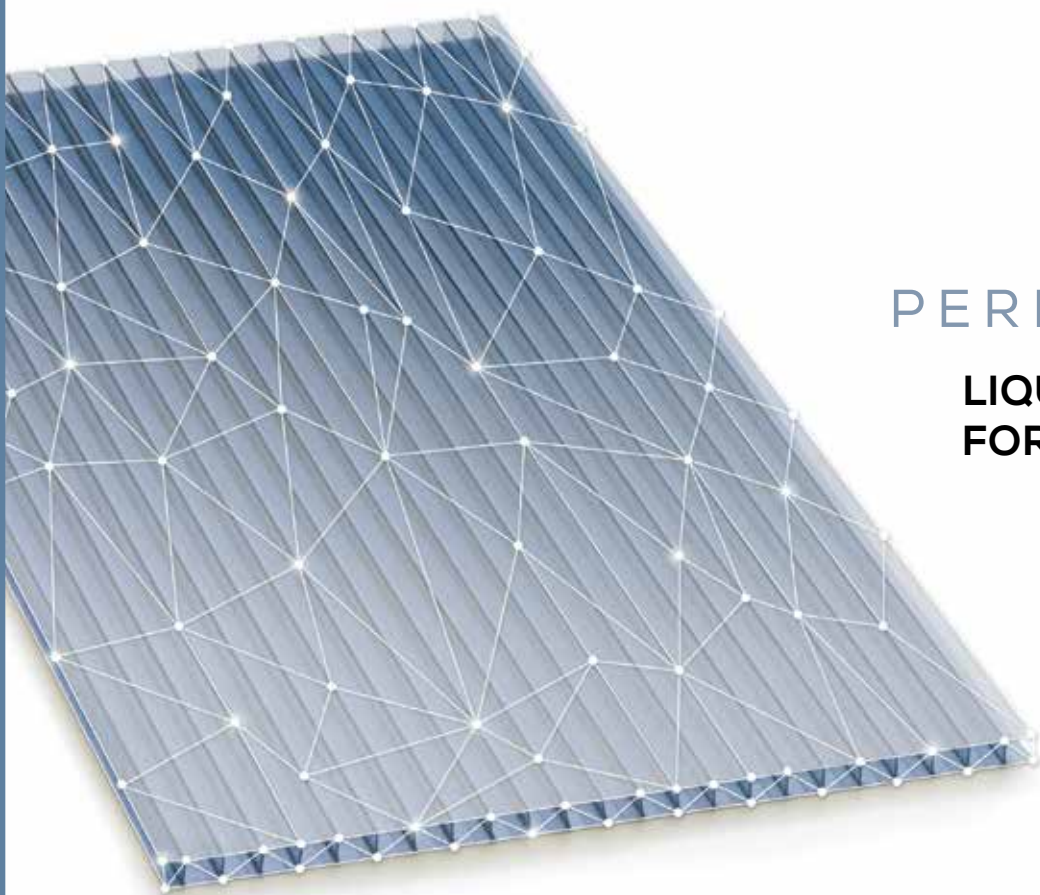
drichshafen from 15 to 19 October. This is the world's leading trade event for industrial plastics processing with more than 1,600 exhibitors. It will be possible to meet Filtec at stand A6-6405 in pavilion A6.

In these prestigious events, Filtec will have the opportunity to interact with the main players in the plastic recycling sector, present its products and share its know-how. Furthermore, the company will make a virtual showroom available to visitors which will allow them to explore the machinery interactively, providing a detailed and realistic vision of the characteristics and potential of the systems.

In summary, thanks to tireless work oriented towards continuous improvement and a strong vocation for environmental sustainability, Filtec today represents Italian excellence with a global presence. Participation in international trade fairs, attention to recycling and the very high quality of the offer consolidate Filtec's position as a leader in the sector of filtration and granulation of plastic materials.

www.filtecsrl.eu

FILTEC @ Fakuma 2024: hall A6- Booth 6405



PERFORMANCE DETAILS

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Promix solutions: Eco-friendly innovations for mixing, foaming, and cooling

At the Fakuma, held from October 15 to 19 in Friedrichshafen, Germany, Promix Solutions will exhibit key components for the production of light foams, static mixers, melt coolers and inline viscometers for real-time process control, at the new location in Hall A6, Stand 6108.

Promix Microcell Technology on an extrusion line for packaging films



In extrusion, material accounts for 80% of the CO2 footprint. This is where Promix comes in: With Microcell Technology, a microcellular foam structure is created in the polymer by adding environmentally friendly atmospheric gases. This results in a 20-50% reduction in product weight, leading to significant savings in raw materials. Not only does this lower production costs, but it also benefits the environment.

Promix Microcell Technology is suitable for films, sheets, foam core and corrugated pipes as well as profiles, cable sheathing, blow molds and blown films. At Fakuma, Promix will be showcasing relevant key components and providing information about the possibilities within the specific fields of application. More than 300 industrial references are now in operation and various machine manu-

facturers are successfully integrating the technology into their lines. Promix Microcell Technology can be used for almost all raw materials, such as PP, PE, PET, TPE, TPU, PA, rigid & soft PVC and biopolymers. The technology is available for new extrusion lines and as a retrofit solution for existing lines.

Monitoring raw material quality and process conditions in real time

The increased use of recycled material and raw materials from different sources makes it more and more difficult to keep extrusion processes under control. The "Visco-P" inline viscometer measures the actual viscosity under processing conditions and in real time directly in the melt stream, without any bypass or material loss. The measuring module, which is tailored to the application, homogenizes the melt without the risk of clogging, deposits or decomposition. The Visco-P is therefore ideal for recyclates as well as filled and shear-sensitive materials.

Trend evaluations and reporting tools enable the measurement results to be recorded with statistical analysis. User-selectable upper and lower limits for the viscosity trigger an alarm and inform the operator of current deviations from the target



The inline viscometer "Visco-P" measures the actual viscosity of the melt under process conditions in real time

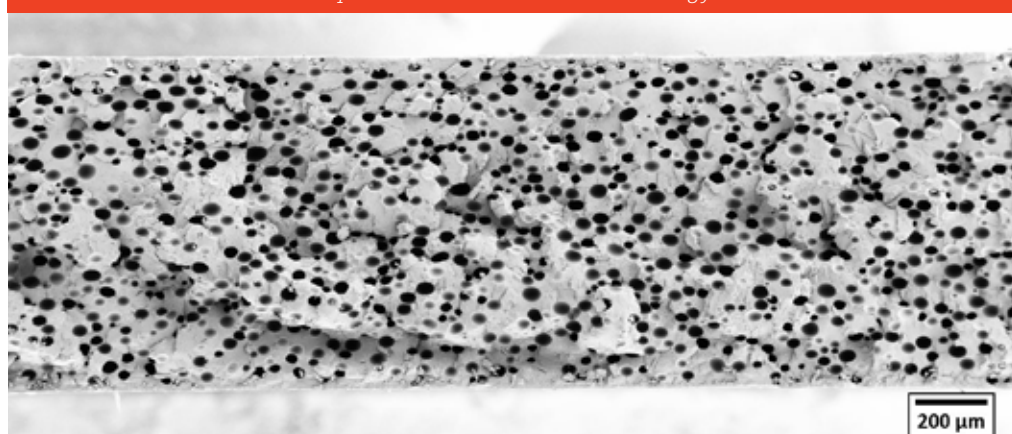
value. This means that corrective measures can be initiated immediately to ensure a high level of quality.

The Visco-P inline viscometer is compatible with all common extruder types and almost all polymers and can be retrofitted to existing systems.

www.promix-solutions.com

PROMIX SOLUTIONS @ Fakuma 2024: hall A6 – Booth 6108

Foamed sheet produced with Microcell Technology from Promix



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Si-6s series



Automotive



Packaging



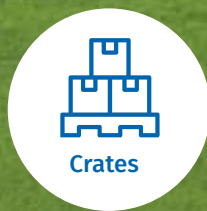
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Switching up efficiency: conserve resources and increase performance with Sumitomo solutions

Sumitomo (SHI) Demag

Given the rapid rise in electricity prices and changing legal requirements, energy efficiency is becoming an increasingly significant purchasing argument. Having developed an IntElect for every market segment, including automotive, electronics, packaging, medical and consumer, the company will present how they are now assisting processors to save even more energy.

On the main booth, visitors will discover why compact does not mean compromising on performance or component quality. Using live exhibits, visitors are invited to explore how digital features like myAssist, automation and OPC-UA connectivity can help processors get more out of their equipment while minimising wasted downtime. Testament to the rapid growth in LSR innovations, three exhibits will also showcase how the technological advancements are aligning to the latest regulatory policies.

IntElect Multi for automotive applications

With automotive accounting for the largest share of multi-moulding components, another main stand exhibit features the compact IntElect 130 Multi machine equipped with a flexible 6-axis articulated robot from Sepro. Offering speed, precision and energy efficiency advantages over their hydraulic multi-component counterparts, the smaller footprint IntElect Multi fills an important gap in the market. By increasing the mould space, Sumitomo (SHI) Demag has engineered a compact cell that can easily accommodate multi-cavity tools.

Manufactured in the 2K injection moulding process with PC and ABS material, the tool comes from BIA Kunststoff- und Galvanotechnik, high-quality interior elements are created. The tool is rotated by a fully integrated turntable from Polarform. This turntable is equipped with its own inverter and a drive system from Sumitomo, achieving rotational speeds up to 0.9 seconds, depending on the mold size. In this arrangement, the IntElect Multi is combined with the flexibility of a 6-axis robot and thus two parts are created in each production process, with a total cycle time of 25 seconds.



IntElect midsize

New injection unit expands application spectrum

Business Development Director Medical Andreas Montag will present the company's global medical offering, which now comprises a powerful injection unit for a 180 ton machine. With the introduction of a 910 injection unit, the largest that can be accommodated in this 180 ton machine, the range of applications in the clamping force range of 130-180t is expanded.

To demonstrate this flexible combination and fine processing control, the exhibit will mould syringe plungers from a non-porous High-Density Polyethylene (HDPE) using a 32-cavity tool, with a shot weight of 29 grams. This application is realized in cooperation with elm-plastic, who also provide the tool and appropriate peripherals. Processors can also add a 50mm screw, allowing them to mould larger parts. Having the option to rapidly switch

between three screw sizes (45, 50, and 60mm, with the option to add 55mm too), ensures that the optimum screw size is selected to suit each medical application. Further increasing processing flexibility and production capacity.

Best-in-class LSR

Year-on-year, demand to showcase Sumitomo (SHI) Demag's technical LSR competence intensifies. Capped at three IntElect LSR packages at Fakuma in order to present the market with balanced options, live demonstrations range from the manufacturing of an infusion valve on the main booth in collaboration with ACH Solution, to dental covers on the KRACHT stand (A6-6206), plus a single-cavity heat protection cooking mat in partnership with ELMET Elastomere and Momentive Performance Materials (A4-4307).

Each of these exhibits will highlight Sumitomo

IntElect S medical



Do you need to recycle or dose plastic?
Be inspired by our smart solutions!



IntElect multi

(SHI) Demag's market-leading positioning in the LSR market. In particular, the company's OPC-UA programming capabilities and how the ability to view data from integrated technology, including dosing systems, multi-cavity tooling and automation, can optimise efficiency for processors.

The automation options on display also illustrate three payload classes from Sumitomo (SHI) Demag's in-house SAM-C range. The SAM-C20 (payload: 20 kg) on the IntElect 180 with LSR package demoulds parts from a 64-cavity mould from ACH Solution. In the mid-weight range the SAM C-10 will feature on the IntElect 130 Momentive exhibit, in the KRACHT exhibit, a SAM-C5 carefully removes tooth covers from the tool, which is delivered by EMDE, and places them in containers on the side of an IntElect 75 in order to comply with the required hygiene standards.

Energy efficient Packaging machines

Processing packaging materials in the most efficient way directly addresses one of the major operating expenses for mass-packaging moulders: energy consumption. Business Development Director Packaging, Arnaud Nombrot and team will prove the advantages of switching to all-electric. Citing examples of up to 70% reduction in energy costs, this year's packaging exhibit features an IntElect 2 S 220/660-1400, efficiently manufacturing four decorated food containers in PP, with an integrated IML side entry robot. The exhibit features a four-cavity mould tool from Société Nouvelle Caulonque. Feeding labels with precision into the packaging machine is an automated IML system supplied by Pagès Group, with iPB Printing B.V. supplying the high quality labels and TotalEnergies providing the material.

Increased data transparency due to digital process companion

Providing greater processing transparency to help run machines at their most efficient, Sumitomo (SHI) Demag will unveil its advances in myAssist and how further optimisations offer processors even deeper data insights. These



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newest upgrades, summarised by the company as the ultimate 'digital process companion', presents easy to read dashboards, consumption data and KPIs., all defined by the end user. The ability to connect and oversee digital data across multiple machines in a single production facility is also available.

This level of high data transparency makes it possible to spot deviations, aggregate data captured from all OPC-UA filtered sources and react to changes in production processes at the earliest stage. The ability to merge data from multiple sources facilitates complete digital mapping of all production and environmental factors, including historical data. Adding Human Virtual Interface (HVI) and an Expertise module also enables users to put data findings into context by adding labels and more detailed annotations.

Higher production output and automated assembly

Testament that high end and innovative solutions can work together and be cost efficient, this year's HEKUMA collaboration (A7-7202) features Asian tooling specialist Jestar Mold Tech. Rather than using a conventional stack mould to manufacturer petri dishes, Jestar supplies the 2+2 single face tool to support a seven second cycle time and high production output.

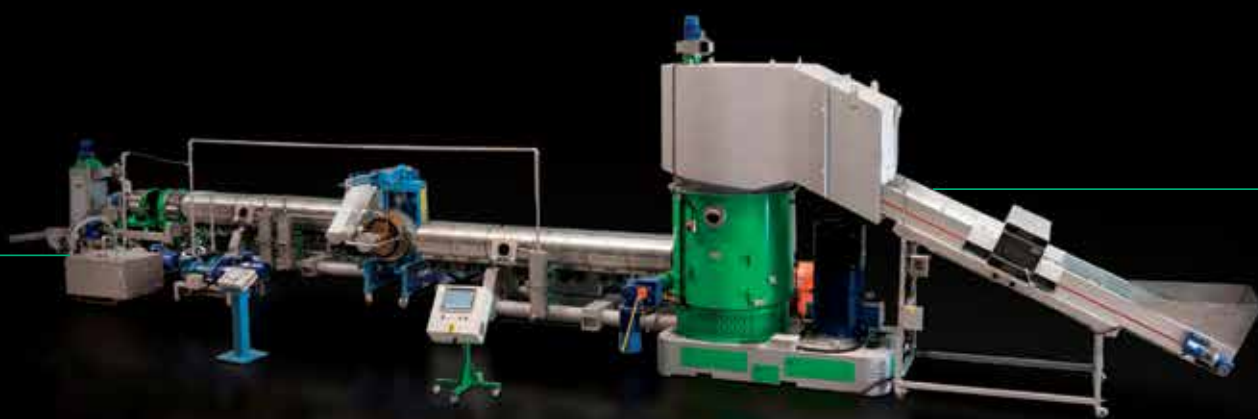
Showcasing that robotics are not confined to demoulding, the Sepro booth (A1-1203) further addresses labour shortages by presenting the future of automated assembly. Optimising efficiency, two moulded parts, a hull and sail boat, are removed from an IntElect 130 by a SDR16E linear robot integrated into the injection moulding machine. The next process step involves the sail being passed to a Sepro articulated arm robot 6X-140.2, which assembles the hull and sail in collaboration with the linear robot. The assembled sailboat is then placed on a conveyor belt. The system is a great example of the close co-operation between Sumitomo-Demag machines and Sepro 6-axis devices.

Other partners at the stand include Digicolor, who supplies materials to all machines, and Regloplas, who supports with suitable temperature control units.

Each of the eight exhibits at Fakuma 2024 exemplifies the close collaborative approach that Sumitomo (SHI) Demag adopts with every industry partner, and the combined drive to boost efficiency for processors locally and globally. A strategy that is totally aligned to the new management team headed up by CEO Christian Maget and CSO Anatol Sattel.

www.sumitomo-shi-demag.eu
SUMITOMO @ Fakuma 2024: hall B1 –
Booth 1105

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Coperion and Herbold Meckesheim at Fakuma 2024

High-Efficiency technologies for processing and recycling plastics.



Photo: Herbold Meckesheim, Meckesheim, Germany

Moreover, rotors from Herbold Meckesheim granulators will be on display in various sizes and for a myriad of applications. Within the rotor concept, the cutting geometry is the primary reason for the high efficiency of Herbold Meckesheim's rotors.

Efficient plants for recycling a myriad of plastics

Along with individual components, Coperion and Herbold Meckesheim deliver entire systems for plastics recycling. From mechanical processing, shredding, washing, separating, drying and agglomerating of plastics, to bulk material handling as well as feeding and extrusion all the way to compounding and pelletizing, such plants cover the entire plastics reclamation process chain.

Currently, Coperion and Herbold Meckesheim are realizing an entire bottle-to-bottle recycling system for Indian preform and plastic packaging manufacturer Magpet Polymer Pvt Ltd. This plant handles every process step from mechanical processing of used PET bottles to discharging high-quality PET granulate, using a ZSK twin screw extruder with fully attuned peripherals to meet every need. Magpet awarded the contract for this PET recycling plant to Coperion and Herbold Meckesheim as they have optimally coordinated their technologies and realized efficient plastic recycling solutions that consistently and reliably deliver high PET recyclate quality.

Recycling Test Center: Seamless connection of every process step



Photo: Coperion, Stuttgart, Germany

In its fully equipped Test Centers, Coperion and Herbold Meckesheim offer customers the ability to test an enormous variety of plastic recycling processes and technologies under actual production conditions even before investing. At Herbold Meckesheim, within its 800 m2 facility in Meckesheim, Germany, there is a complete washing line for cold and hot washing as well as every size reduction solution from shredders and granulators to pulverizers or plastic compactors for densification, all at the customers' disposal. In 2023, Coperion launched the operation of the Recycling Innovation Center in Weingarten, Germany with state-of-the-art, individually configurable recycling plants where recyclate can be conveyed, fed, extruded, compounded, pelletized

At Fakuma 2024 (15-19 October 2024, Friedrichshafen, Germany) Coperion and Herbold Meckesheim will jointly present numerous product and process solutions that make both compounding and recycling of plastics markedly more efficient and that consistently achieve high product quality.

Coperion and Herbold Meckesheim will demonstrate their expertise in realizing entire systems using virtual animation: Both a complete compounding plant as well as an entire system for recycling plastic will be available to view. The processes involved can be experienced digitally with the aid of simulations, and visitors will be able to peer into individual key components and their functions.

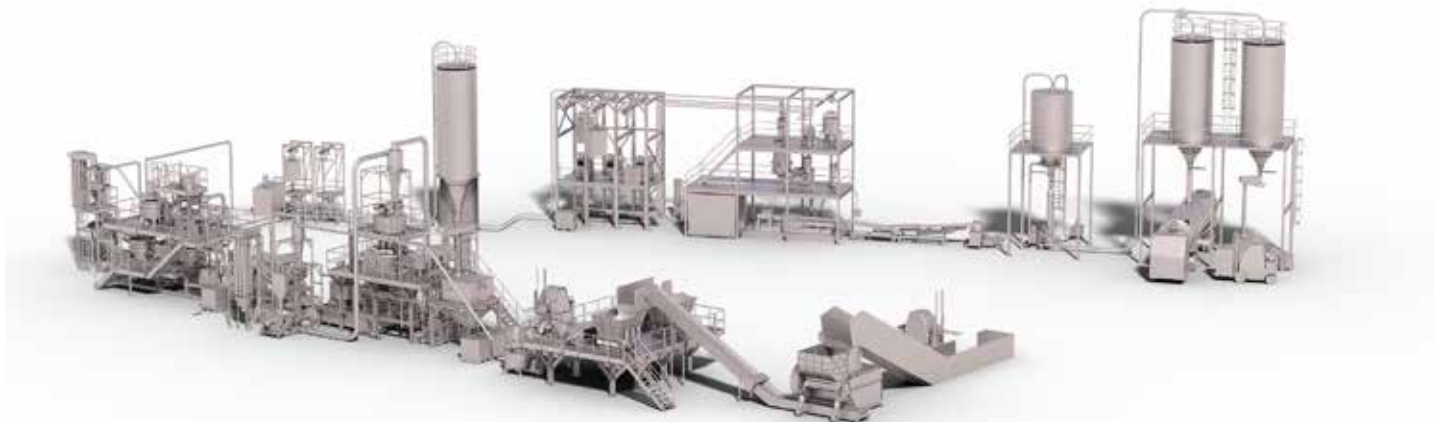


Photo: Coperion, Stuttgart, Germany

METALMECCANICA ROSSI

and deodorized. Both Test Centers complement each other perfectly to simulate and test the recycling of plastics. During the Recycling Days 2024 on November 6 and 7, Herbold Meckesheim and Coperion are offering the opportunity to see the new Recycling Innovation Center in person. At this symposium, industry experts will highlight currently available technology and process solutions that make plastics recycling economically more appealing and versatile to use. Additionally, the entire recycling process will be on view in live presentations.

Smart solutions for classic compounding tasks

Along with recycling, at this year's Fakuma, Coperion will present versatile and efficient uses of its ZSK and STS twin screw extruders as well as its feeding and conveying technologies for classic compounding tasks. With continuous research and development, Coperion continues to pursue its goal of setting new standards in machine and plant engineering for processing technology. For example, at the beginning of this year, Coperion introduced a re-worked version of the ZSK 18 MEGAlab laboratory extruder. With its optimized design, the ZSK MEGAlab now offers even more flexibility and safety in handling. Using the newly developed patent-pending feeding platform, up to four feeders can be placed over the extruder's intake barrel with great variability, allowing ingredients to be added very flexibly into the compounding process.

Likewise, Coperion's ProRate PLUS feeder line features new developments. With the ProRate™ PLUS-MT twin screw extruder and the new ProFlow™ bulk solid activator, an efficient feeding solution for powder additives is now available. Continuous-operation gravimetric ProRate PLUS feeders stand out with a good price-to-performance ratio and short delivery times.

www.coperion.com

www.herbold.com

*COPERION and HERBOLD MECKESHEIM @
Fakuma 2024: hall A6 – Booth 6312*



*Photo: Coperion K-Tron,
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Real-time monitoring and control of melt flow rate in extrusion processes

Innovative MFR regulation in recycling with the Leistritz Elongational Rheometer for more process reliability, better product quality and fewer off-specification batches.

Constantly changing material batches from a wide range of suppliers and widely varying input qualities of the feedstock pose major challenges for operators of modern extrusion and recycling systems. Depending on the batch, both the degree of contamination by foreign substances and the melt flow rate of the products can vary greatly. To counteract the latter, Leistritz Extrusionstechnik has developed the Leistritz Elongational Rheometer. During processing, the melt flow rate

is continuously determined in order to be able to respond quickly to fluctuations in the input material, for example by adding additives. The innovative measuring system also provides further sound data with shear and elongational viscosity rates to detect even the slightest deviations in the extrusion process.

Tests reveal better melt quality

In a series of tests for a renowned recycling company, the MFR value for a pre-sorted post-

consumer polypropylene (MFR = 11 g/10 min, 230°C, 2.16 kg) could be modified by adding a peroxide. The MFR value was used to regulate the control command of the peroxide dosing. This allows to produce a product with a freely selectable MFR value in defined ranges. During the series of experiments, batch changes were simulated by first adding and then removing a post-consumer PP/PE blend with a lower MFR value of 2 g/10min (230°C, 2.16 kg). First, a post-consumer PP/PE mixture with a lower MFR value

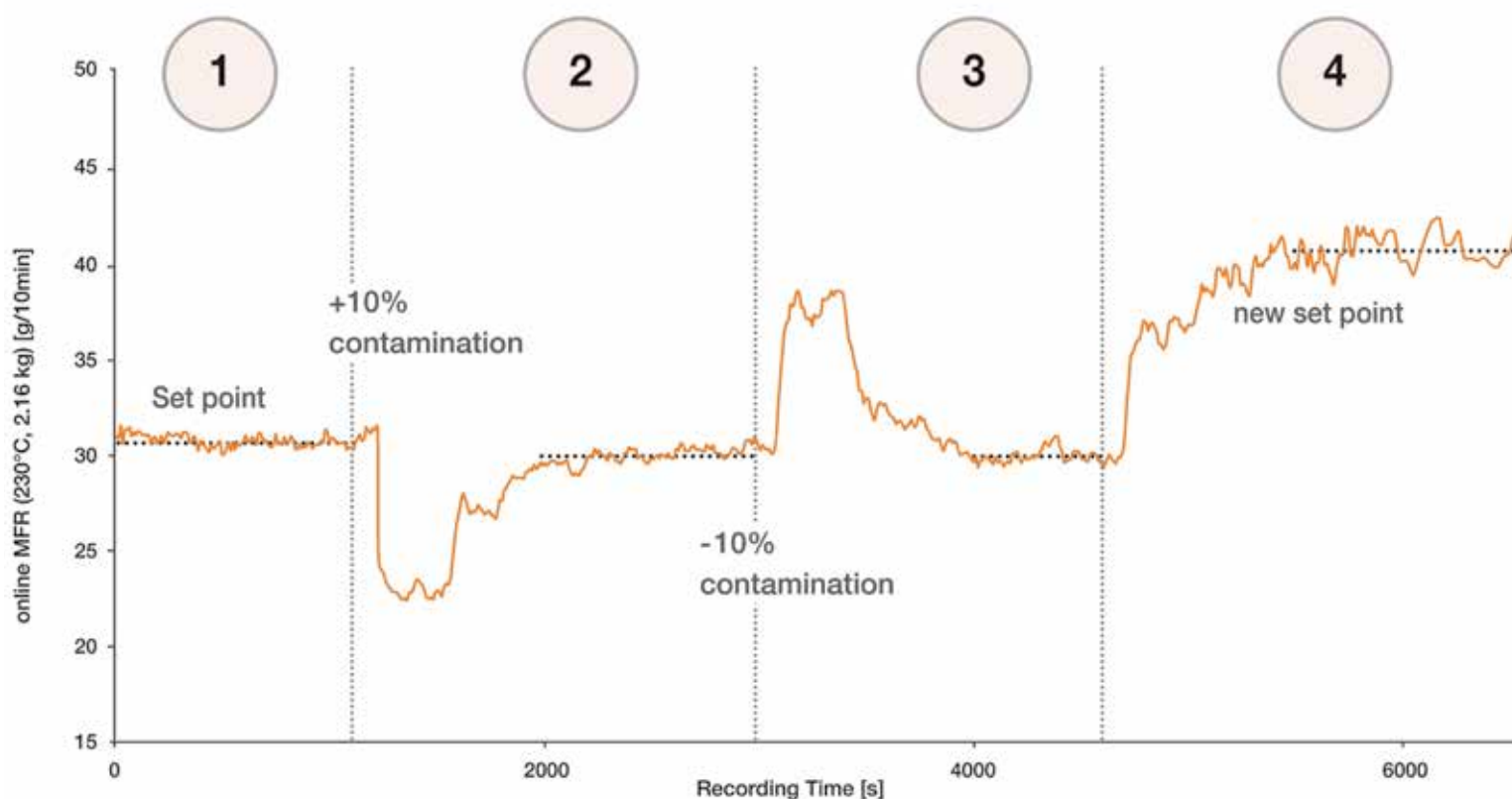


Fig. 1: Online recording and control of the melt flow rate with and without contamination

Fig. 2: The Leistritz elongational rheometer continuously determines the melt flow rate during processing to react to fluctuations of the raw material by adding additives - completely without product loss.



(2 g/10 min (230°C, 2.16 kg)) was added and then removed again.

Figure 1 shows the melt flow rate measured online: section (1) setting target value 30 g/10 min. By adding and then removing 10 % impurity in sections (2) and (3), a deflection to lower or higher MFR values is observed. Adding a contamination agent as a step response simulates the batch change. The set target value of 30 g/10 min was then reached again. Section (4) shows a setpoint jump to 40 g/10 min.

At the end of the multi-stage test series, a comparison of the MFR values measured online and offline showed a deviation of less than 5% from the absolute value. As a smart sensor, the Leistritz elongational rheometer thus reduces product waste and ensures higher product quality thanks to the constant melt quality. It is the only rheometer for monitoring shear and elongational viscosity rates and can be easily integrated into any extrusion process.

www.extruders.leistritz.com

LEISTRITZ@ Fakuma 2024: hall A6 – Booth 6302

Find out more at
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ROEMHELD to premier latest innovations at the Fakuma trade fair: die changing console for loading injection moulding machines without a crane

From the rack to the machine, set-up time optimizer to present integrated solutions for handling dies and moulds.

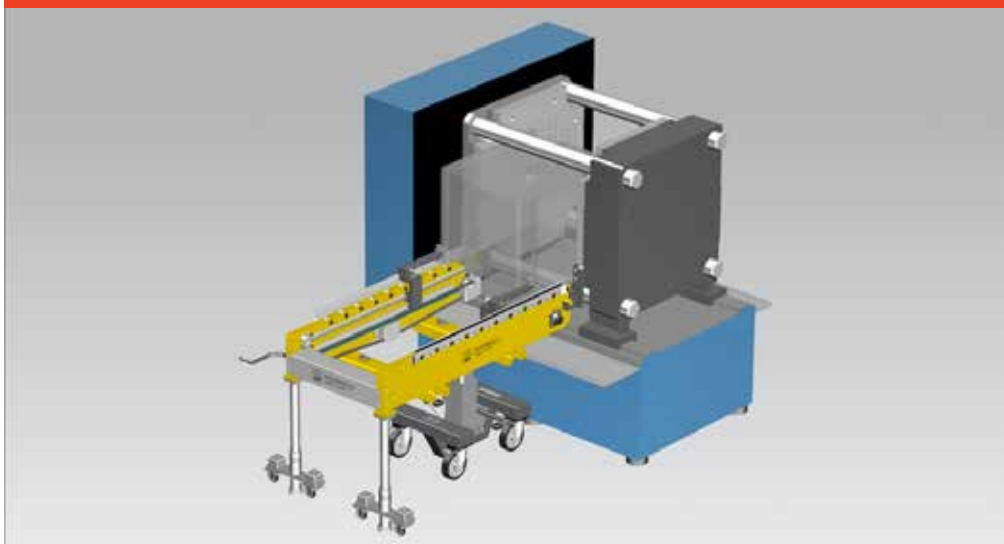
ROEMHELD will premier at the Fakuma trade fair a flexible die changing console that can be used to load different injection moulding machines without a crane. The set-up time optimizer will also present a wide range of components for complete solutions designed to handle moulds and dies along the entire process chain, from the rack to the machine. ROEMHELD will be showcasing their new die changing console and product range for storing, transporting, changing and clamping at Fakuma from October 15 to 19, 2024, in Friedrichshafen, Germany, in Hall 1, Booth 1223.

New, flexible console for die and mould changing

ROEMHELD's new console simplifies die and mould changes on injection moulding machines. It is mechanically driven, movable and height-adjustable so that it can be used flexibly on different machines.

Roller feet help move the console to the desired machine and a lifting column raises the work surface to the correct height. There it is attached in place via a docking system and secured to pre-

ROEMHELD will premier at the Fakuma trade fair a die changing console that can be used to load injection moulding machines without a crane (Image: ROEMHELD)



vent unwanted movement.

The mould can then be moved laterally from a transport cart onto the carrying console. To facilitate this, a circulating chain is attached and a crank handle permanently fixed to the console

helps move the mould, first onto the work surface and from there, further into the system.

The new die changing console makes it easier to transport and change heavy loads between different storage and production sites. It is available in numerous variants and for all die dimensions and weights. In addition to standardized consoles, ROEMHELD designs customized special versions for almost all requirements on request.

Everything from a single source

In addition to a comprehensive range of components for the storage, transport, changing and clamping of dies, ROEMHELD has now expanded its offering of integrated handling solutions. These range from storage systems and transport carts for loads between 500 kg and 40 tonnes to magnetic, hydraulic, electromechanical or purely mechanical clamping systems and comprehensive automation solutions.

www.roemheld.com

ROEMHELD @ Fakuma 2024: hall A1 – Booth 1223



From the rack to the injection moulding machine and rubber press: ROEMHELD will present at the Fakuma trade fair its comprehensive portfolio of products for efficient handling of moulds and dies (Image: ROEMHELD)

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ENGEL unveils the new e-mac 500 with high clamping drive

The new size extends the portfolio of the compact e-mac series upwards. With a clamping force of 5000 kN the e-mac 500 combines high performance, energy efficiency, and a compact design suited to modern production environments.

Launch of the fully electric ENGEL e-mac 500 with HIGH clamping drive and iQ motion control.



The e-mac 500 (Image 1) features the new HIGH clamping drive, paired with an encapsulated toggle lever mechanism for fast and stable cycle times. Designed to bridge the gap between standard and high-performance applications, it is complemented with the digi-

tal assistance system, iQ motion control, which automatically adjusts the acceleration of the moving platen according to the tool's weight. This combination sets new industry standards, significantly reducing cycle times and cutting energy consumption by approximately 30% com-

pared to hybrid or hydraulic injection moulding machines. The e-mac 500 is particularly suited for energy-intensive production processes where efficiency and precision are critical.

The machine also impresses with its compact design, requiring minimal floor space despite its powerful capabilities. For specialised applications, ENGEL offers optional expansion packages, including solutions for thin-wall injection moulding and cleanroom use. The versatility and high performance of the e-mac 500 will be demonstrated live at Fakuma, producing 4-litre containers with in-mould labelling in a two-cavity mould with a cycle time of just 8 seconds. The automation, which includes a viper linear robot, also features components from ENGEL's subsidiary, TMA (Image 2).

With the new e-mac 500, ENGEL is emphasising its position as a technology leader, demonstrating how advanced technology and intelligent assistance systems can make plastics processing more efficient and sustainable. This machine offers excellent value for money and is a future-proof solution for companies seeking maximum efficiency in production.

ENGEL e-mac 500 with automation from TMA for in-mould labelling.



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Hall A5 / Stand 5203

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Friedrichshafen - DE
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HALL A5 / STAND 5122



TOP 3100 LSR dosing system rounds out Elmet's product portfolio

Together with the TOP 3100, Elmet now offers four dosing systems that meet customer requirements at every equipment level.

At Fakuma 2024, ELMET will be presenting its expanded portfolio of dosing systems with various equipment levels for LSR injection molding at booth A5-5306. Together with the tried-and-tested TOP 5000 P and 7000 Pro, the new Top 3100 and TOP 700 models cover a wide range of different customer requirements in terms of footprint, drum size and degree of automation. An upgraded pump is now also capable of processing particularly highly thixotropic or stable materials. Visitors to the trade fair will be able to see the TOP 700 dosing system in

action at Arburg's booth (A3-3101). While at Momentive Performance Materials' booth (A4-4307), a TOP 7000 Pro dosing system will be showing off its capabilities as part of a joint project together with Momentive and Sumitomo. Elmet also constructed the cold runner mold installed there.

Uncompromising precision

The TOP 3100 LSR dosing system will make its debut at Fakuma 2024. It offers processors the same high precision as Elmet's high-end dosing systems, and it also meets the same high

requirements in relation to all internationally applicable norms and safety standards. However, its features are slimmed down to the key components for the basic application, without compromising on performance, process stability or service life. It differs from other Elmet-systems in terms of the achievable level of automation and the available optional equipment, including the number of additive lines, drum change automation, and accessibility. This allows those users who run processes with clearly defined requirements over extended periods to invest only in the equipment level they actually use on a day-to-day basis.

The TOP 3100 is equipped with the same processing unit and the same additive system that are characteristic features of all of Elmet's other LSR dosing systems. As a result, it can achieve delivery rates of over five liters/minute, so enabling short cycle times both when filling larger moldings and with large numbers of nests. Additives and colors can be dispensed from 1, 4 and 20 liter containers. The measuring cell resolution of 15.6 $\mu\text{l/l}$ (64,000 pulses/l) and the integrated volumetric color meter with a resolution of less than 0.1 $\mu\text{l/l}$ maximize mixing and dosing precision, which is particularly important for very small parts. Maintenance costs are minimized by the processing unit's modular design with integrated cooling and simple clamp connection, which simplifies cleaning and means even relatively low-skilled personnel can operate it without difficulty.

Minimized footprint

For the first time in Europe, visitors will be able to see the completely newly developed TOP 700 LSR dosing system. Premiered at the recent NPE 2024 show, it sets a new benchmark in compact dosing technology since its footprint of less than 0.5 m^2 (799 mm \times 600 mm) makes it the most compact 20-liter system currently on the market. The TOP 700 dosing system offers the same high precision when dosing silicones and additives as the flagship TOP 7000 Pro with 200 or 20 liter drum sizes. Moreover, the same optional equip-



ment is available and the same levels of automation achievable.

The follower plates' optimized design means that, depending on material viscosity, just 40 ml of residues are left behind when the 20 liter containers are changed, resulting in material utilization of up to 99.8%. Thanks to these features, the TOP 700 dosing system can meet industry's demanding requirements for high cost-effectiveness and process-stable efficiency combined with the smallest possible footprint. Typical applications include R&D, prototyping, and smaller batch sizes. Designed to be FDA- and EMA-compliant, it is also suitable for applications requiring the highest levels of cleanliness such as medical technology, personal care, foodstuffs, and optics.

Broader viscosity range

In addition to the previous standard S pump unit, Elmet is now integrating the new M unit into the TOP 3100 dosing system, while there is a choice between the two for the TOP 7000 Pro system. The new pump is capable of an increased delivery pressure of up to 230 bar. Together with its innovative design with an upstream primer piston, this allows materials in a further expanded viscosity range from 0.001 Pas to 3000 Pas to be processed. The M pump unit can thus handle any commercially available LSR material, including highly stable materials, such as those with carbon black or mineral fillers, and self-adhesive materials that tend to become more viscous. Even abrasive materials, e.g. thermally conductive materials for e-mobility applications, can be pumped without any problem. Discharge capacity is only slightly below that of the S pump unit. Existing TOP 7000 Pro dosing systems can easily be changed over from S to M and back.

Energy consumption benchmarks

Measurements carried out by Elmet on various dosing systems show that, with an idle power consumption of only 50 Wh and, depending on process conditions, an average energy consumption of 150 to at most 400 Wh, pneumatically driven dosing systems allow energy savings of up to 50% compared to purely electrically driven systems. The reason for this is that compressed air, being a pneumatic spring, acts as a perfect energy storage system and consequently dosing systems driven this way consume virtually no energy in the standby position. This improves the carbon balance and saves costs. As a result, Elmet dosing system can help to enhance a production line's overall performance while simultaneously reducing its environmental footprint.

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Increasing demand from the automotive industry: post-consumer recycled material is the new key to sustainable technical compounds

Applying TechnoCompound's concentrate dilution concept means that the level of potential carbon savings is determined by the formulation of the underlying recycled material and its content in the compound.

Drawing on over 35 years' experience in the production and use of post-industrial recycled (PIR) materials in reinforced thermoplastics, TechnoCompound is particularly focusing its presence at Fakuma 2024 on its growing range of solutions using post-consumer recycled (PCR) materials for demanding technical applications. One development priority is on emission- and odor-reduced, long glass fiber (LGF) compounds for the automotive industry, specifically for vehicle interiors. The company can offer a growing number of ready-to-use (RTU) TechnoGreen grades based on polypropylene. In addition, TechnoCompound's new Concentrate Dilution Concept (CDC) makes it possible to blend TechnoFiber LGF compounds for structural components with PCR to achieve the mechanical properties required for the application while at the same time reducing the finished products' carbon footprint to the greatest possible extent. While some RTU grades containing PCR are already in use in mass production applications, the new CDC solutions are currently under evaluation by OEMs. Another development project TechnoCompound will be presenting at Fakuma 2024 is materials for PCR-based packaging for the non-food sector.

Ready-to-use or individually compoundable

Across all product ranges, 70% of the company's compounds already contain recycled material. Around 30% have PCR contents of between 20% and 100% and the intention is for such use to go on rising. These sustainable material solutions open opportunities for tier 1 suppliers and OEMs in the automotive industry to ensure compliance with the End-of-Life Vehicle (ELV) Directive for new and further developments. Working hand-in-hand in strategic partnerships with these players, as well as others from industry in general, TechnoCompound can offer all-round support in the de-

velopment of suitable closed-loop solutions with a reduced environmental footprint.

Ready-to-use TechnoGreen PP LGF grades with fiber contents of 20 to 50 wt.% have long been marketed. They were initially available as compounds with PIR material (classes GK1 and GK2 according to the VW standard) for improving environmental characteristics. The company can now also offer TechnoGreen RTU grades with PCR contents (class GK4) of between 21 and 35 wt.%. Two of these are already in mass production. The special pultrusion process used by TechnoCompound results in high-quality compounds that perform as well as products based on virgin materials.

In addition to the RTU grades, TechnoCompound's new Concentrate Dilution Concept may be the right solution, in particular for structural components. TechnoGreen PP LGF 60 with a matrix of 100% virgin material (class GK1A) is used as the base material. This is blended in-machine with TechnoFin rPP, which consists of 100% PCR (class GK4). For example, when blended in a 1:2 ratio, it is thus possible to make carbon savings of 55% in comparison with processing virgin material with the same fiber content. A further advantage is reduced inventory, as material inputs are limited to two components instead of many when various prefabricated blends are processed.



The instrument panel carrier (IP carrier) of the Mini Cooper E is one of the first applications of TechnoCompound's RTU compounds in vehicle interiors.

Tests passed with flying colors

A whole series of TechnoCompound's RTU compounds have now passed the automotive industry's stringent testing and have found their way into mass production in two Audi models, one Seat model and the 2024 models of the Porsche Macan and the Mini Cooper. Applications include instrument panel (IP) carriers, which are subject to the strict limits for volatile substance and odor emissions applicable to interior applications.

Documented sustainability

TechnoCompound is playing a pioneering role with certificates from its partner company ConClimate. These certificates, which state the PIR:PCR ratio, have been indicating the carbon footprint and carbon savings for all products since early 2023. Values are calculated using Substain software which, on the basis of recognized emission factors, provides carbon emissions (scope 1, 2 and 3) including packaging "to gate" using TechnoCompound's factory gate as the default. The company is also planning to be in a position to disclose its corporate carbon footprint shortly and to draw up a decarbonization plan in line with the Polymer-Group's sustainability goals. Along the entire value chain, these measures help complying with statutory, customer and social sustainability requirements, achieving the company's own environmental targets and meeting likely upcoming statutory requirements for recycle content in new products.

Into pole position

As Managing Director Dirk Breitbach explains, "It's 35 years that we've been using recycled materials to produce high-quality compounds. Thanks to strict quality standards, these products, as well as our new PCR-based solutions, meet stringent requirements across a wide range of applications. Our experience in the production, processing and application of these products means we can support customers in the automotive industry and other sectors right from material planning and optimization through to the start of mass production while boosting sustainability." And Head of Sales Rifat Erden adds, "Our standard TechnoFiber grades, our new TechnoGreen RTU compounds and the CDC (Concentrate Dilution Concept) with PCR components increase flexibility and are a strong starting point for our customers. This puts them in pole position in terms of sustainability and gives them an opportunity to win a long-term lead on their competitors."

www.technocompound.com

TECHNOCOMPOUND @ Fakuma 2024: hall A4
- Booth 4217





Haitian International at Fakuma 2024: smart, flexible solutions to increase efficiency

At Fakuma, Haitian International will be presenting its new generation of machines and showcasing complete solutions including peripherals from Haitian.

This year Haitian will be presenting its smart, flexible solutions designed to increase productivity and help companies remain competitive in a dynamic market. A total of six machines will be on display, three of them at its own stand and three more machines at the stands of Gollmer Formen GmbH (A2 – 2213), Nonnenmann GmbH (A1-1101) and TST DE GmbH (A1-1512).

All the exhibits at Fakuma represent the 5th generation of machine technology. This is characterized, among other things, by energy savings of 20-40% compared to its previous version and features innovations such as the HT·XTEND Smart Features. Smart machine functions in terms of process stability and machine efficiency, which are included in the standard configuration of all machines almost without exception.

Peripheral devices from the affiliate Haitian Smart Solutions will also be presented for the first time in Germany. The peripheral devices impress with their simple and seamless integration into the new Haitian control system.

“We were already able to give many customers

a sneak preview at our Open House in June. I agree with many of our guests, that this is the biggest technological leap we have made so far. I am even more excited to be able to present our current portfolio to a wide audience at Fakuma.” Niels Herz, Sales Manager Germany at Haitian International Germany regarding Fakuma 2024.

Live exhibits at the Haitian stand in Hall A1 – 1103

An electric Zhafir Zeres series with medical package, producing 8 cavity syringe cartridges (1.5 ml), is equipped with a laminar flow box, pneumatic quality flap and conveyor belt. Part of the process is the automatic clamping force regulation (HT·OptiForce), which reduces the clamping force from 500 kN to 80 kN, resulting in energy and material savings.

Another electric ZE1500V produces 1.2 g cable clamps (16-cavities) from PA6.6GF30. The machine is equipped with a real-time monitor that visualizes the filling process. The dryer, material feed and temperature control unit are made by Haitian and are integrated into the controller.

The servo-hydraulic world bestseller, the Haitian Mars series, comes with a clamping force of 200 tons and produces frisbee discs from 100% recycled PP. The machine showcases the function HT·Inject, which ensures greater process stability during injection. The entire production cell and peripheral system is fully provided by Haitian.

Technology to the Point: A vision for the future

With its product philosophy “Technology to the Point”, Haitian continues to focus on solutions that are designed to drive efficiency and flexibility. In the face of increasing competition, growing demand for sustainable solutions and a growing shortage of skilled labor, Haitian’s machines and production cells are designed to simplify operation, increase productivity and reduce energy consumption.

www.haitianinter.com

HAITIAN INTERNATIONAL @ Fakuma 2024:
hall A1– Booth 1103





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Haitian: focus on machine technology and efficient production

At Fakuma 2024, Haitian will highlight its 5th generation machines, designed to meet the increasing demands for energy efficiency and process stability, while also demonstrating Haitian's role as a wholistic solution provider.

All together Haitian will showcase 6 live applications on its 5th Generation injection molding machines. Three on their booth in hall A1-1103 and three on partner booths.

Haitian Mars Series MA2000V/750

As the world's best-selling servo-hydraulic toggle machine with more than 410,000 units run-

ning in manufacturing halls around the globe, the Haitian Mars Series sets the standard for efficiency and flexibility in injection molding. A Mars 200t machine, will be producing Frisbee discs from 90-95% recycled Systalen® PP supplied from Der GrünePunkt, boosted with 5-10% Vistamaxx™ performance polymer provided by ExxonMobil, embedded in a production cell, provided entirely by Haitian. The smart machine feature HT-Inject guarantees a stable injection process and part weight despite the 100% regranulated material.



Picture 1: Haitian Mars MA2000V/750

A Hilectro V1000 robotic system will pick the 1 cavity part. Safety fence, conveyor belt, material feeding system as well as color mixing are all provided by the sister company out of the Haitian Group, Haitian Smart Solutions. Hotrunner system by Meusburger. The laser texturing inside the mold has been realized by Reichle Technologiezentrum.

This setup demonstrates Haitian's portfolio in offering solutions from machine to peripherals and more. With an energy-saving potential of 20-40% on average - compared to the already energy-efficient previous Generation 3 - the MA2000V is a clear demonstration of how Haitian's machines

can help manufacturers reduce operational costs while maintaining high-quality outputs. The Zhafir Zeres Series ZE1200V with integrated hydraulics is equipped with a me-

dical package, catering to the growing demand for high-precision medical injection molding applications. This electrical machine, will be producing 1 ml syringes from PP, using a mold supplied by Ruhla with 8 cavities. Material provided by ExxonMobil. The smart machine feature HT·OptiForce automatically regulates and reduces the clamping force from 500 to 80 kN in order to save energy. The machine operates with a laminar flow box and quality flap from Petek Reinraumtechnik, ensuring optimal production conditions for medical-grade parts and a hotrunner system from Meusburger. This exhibit highlights Haitian's commitment to delivering machines capable of meeting the strict regulatory requirements and high demands of the medical industry while ensuring flexibility and ease of integration into existing manufacturing systems.

Zhafir Zeres Series ZE1500V-640

The Zhafir Zeres Series ZE1500V is the most popular model throughout Europe, designed for high flexibility and precision. At Faku-

Picture 2: Zhafir Zeres ZE1200V-430 medical



ma this machine will be producing cable holders from PA6 GF30 in a 16-cavity mold supplied by Oerlikon.

Peripherals will be provided by Haitian Smart Solutions and are completely integrated into the new controller of Generation 5 machines. Amongst are Haitian's 3-in-1 dryer, TCU (temperature control unit) and a quality flap. Also integrated is the digital flow measurement by FloSense, the hotrunner, supplied by Meusburger, and the in mold cavity pressure monitoring from CavityEye.

With its real-time monitoring and process optimization features, the ZE1500V serves as a demonstration of how Haitian's machines can not only improve production efficiency but also enhance product quality through intelligent integration of advanced peripherals and real-time data analysis.

www.haitianinter.com

HAITIAN INTERNATIONAL @ Fakuma 2024: hall A1- Booth 110

Picture 3: Zhafir Zeres ZE1500V-640



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Cold Jet presents the next generation of the Aero2 ULTRA Series at Fakuma 2024

New Performance Standards in dry ice blasting technology as a key to efficiency and sustainability.

Cold Jet® will be presenting Cold Jet's new Aero2 ULTRA Series at Fakuma in Friedrichshafen (Hall B3 - Booth 3110). The machines represent the pinnacle of dry ice blasting technology and will set the standard for dry ice blasting equipment in the coming years.

The Challenge of Efficiency in Modern Production

The challenges in plastics production are manifold. Production managers are constantly faced with the task of optimizing material usage, saving energy and, at the same time, accelerating production processes. All this must be achieved without compromising the quality of the end product. Efficiency plays a central role in this context. Efficient production not only enables cost savings but also contributes to sustainable business practices by conserving resources and reducing emissions.

Dry Ice Blasting as a Solution for Increased Efficiency

A promising technology for improving efficiency in plastics production is dry ice blasting. This method offers numerous advantages, such as cleaning without the use of water or chemicals, which minimizes environmental impact and reduces production costs. Dry ice blasting technology enables thorough cleaning of machines and molds without damaging them, which extends the life of the equipment and reduces downtime.

Introduction of the Aero2 ULTRA Series

At Fakuma 2024, the new Aero2 ULTRA Series will be presented. This innovative product line sets new standards in dry ice blasting technology and supports the plastics industry in mastering the challenges of increasing efficiency. The Aero2 ULTRA machines are characterized by moisture-resistant mechanics and a most advanced ultra-cold performing motor. The all-metal gearboxes improve durability, reliability, and efficiency. The machine stability has also been upgraded with completely new proprietary



Photo 1: Cold Jet Aero2 ULTRA series

control firmware and motor drivers.

"The Aero2 ULTRA Series represents a significant leap forward in dry ice blasting technology," says Dave Burbrink, Cold Jet's Global ECaSP Design and Technical Director. "We've listened to our customers and addressed their most pressing needs for enhanced performance, user experience, and connectivity. The result is a series of ULTRA machines that empower businesses to achieve new levels of cleaning success."

The Aero2 ULTRA Series was developed to meet the diverse needs of customers. A plastics processor can clean many types of surfaces with one machine, such as the surface of injection molds, deburring, as well as injection screws. Previously, a company needed several machines with different levels of aggression to clean them.

Process Efficiency and User-Friendly Operation

Mold cleaning remains an important part of producing quality products. Cold Jet understands this and offers solutions to clean molds efficiently, more frequently, faster, more cost-effectively

and non-abrasively, in a sustainable and environmentally friendly way. Cold Jet's environmentally friendly dry ice cleaning and surface preparation systems provide a proven solution to achieve the productivity, quality and cost reduction initiatives sought by many companies. Dry ice is also used for deburring and deflashing plastic parts. Duroplast parts (sometimes also thermoplastic parts) have a degree and the part geometries are not always suitable for tumbling. Cold Jet's solutions for this are often fully automated.

Live-Demo at Fakuma 2024

Cold Jet cordially invites all visitors to Fakuma in Friedrichshafen, Germany, to visit their booth in Hall B3, Booth 3110. Visitors can experience the Aero2 ULTRA Series live in action. In a live demo, Cold Jet will show how these machines not only make cleaning processes more efficient, but also reduce overall operating costs and increase the sustainability of production.

www.coldjet.com

COLD JET @ Fakuma 2024: hall B3- Booth 3110

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Property-enhancing additives and eco-friendly solutions for plastics

Additives from Tosaf help to give containers made from virgin PET and rPET the best possible properties in terms of aesthetics and functionality.



At Fakuma 2024, Tosaf will be presenting its latest developments in the field of property-enhancing masterbatches for the plastics industry. One focus will be on the optimisation of products made from PET and rPET in particular. The international company will also be presenting its new PPAX colour masterbatches for colouring PPA, PFAS-free processing aids for film extrusion and halogen-free flame retardants for PP. Examples of Tosaf's commitment to sustainability will include the CO2 footprint calculator, bio-based materials, recyclates and biodegradable plastics.

Optimising the properties of PET and rPET

As to be shown at Fakuma, Tosaf offers a wide variety of solutions for PET and rPET that help to optimise quality, efficiency, sustainability and costs during processing and recycling. With regard to the aesthetics and functionality of PET packaging, additives are available that correct the colour and gloss of rPET or prevent water droplets from depositing on the inner walls of packaging. Additives for absorbing and eliminating oxygen from the headspace of packaging, UV protection additives and - especially for milk containers - ultra-lightproof white masterbatch help to extend product shelf life. Acetaldehyde scavengers prevent changes in the flavour of water in rPET bottles. Processing aid additives prevent electrostatic charging or change the surface properties of PET to prevent blocking and reduce the coefficient of friction. Special IR absorbers facilitate thermoforming with uneven wall thicknesses without impairing clarity.

Additives are used to improve the properties and quality of rPET by linking shortened PET polymer chains and thus increasing the molecular weight. Compatibilisers enable the recycling of PET-PCR blends that are contaminated with polyolefins or barrier plastics such as PA and EVOH. An NIR-reflective black masterbatch facilitates sorting during recycling.

HFRR for safe fire protection with PP

FR8719PP is an innovative, halogen-free flame retardant (HFRR) from Tosaf for PP pipes or moulded parts that are used, for example, for laying and fixing cable conduits and for conducting liquid media. Even in low concentrations, it makes it easy to comply with strict fire protection criteria and thus enables a switch to a more sustainable solution without the products losing any of their flame retardancy and properties. Processing advantages are the good dispersing behaviour in the melt and the very low formation of dye build-up during extrusion. If halogen-free is not a priority, brominated flame retardants such as FR6413PE and chlorinated, low-cost grades such as FR-0049PE from Tosaf offer high thermal stability and fire protection without compromising the product properties.

PFAS-free for improved processability

Tosaf's PFAS-free processing aids for the extrusion of polyolefins can be used without restriction instead of conventional formulations for film production. They meet the FDA and EFSA food contact requirements and, depending on the grade, are optimised in terms of either their rheological or

their optical properties such as light transmission, haze and clarity. The unproblematic behaviour of PFAS-free monomaterial PE films in recycling is an advantage.

Coloured PPA without loss of properties

With PPAX, Tosaf Color Service has developed a new colour masterbatch carrier system that is based on the high-performance plastic PPA (polyphthalamide) and is combined with specially selected pigments that allow high processing temperatures. This makes it possible to produce products made with it in brilliant and varied colours without reducing the high heat resistance, very good strength, stiffness and toughness, low moisture absorption and high chemical resistance. It can also be used to laser mark coloured parts.

Documented sustainability

Tosaf is leading the way on the 'green path'. It quantifies and reports on its carbon footprint down to product level, utilises solar energy and offers a portfolio of products based on renewable sources or recycle. Thus, the company is already prepared for a further tightening of regulations. At the same time, Tosaf is fulfilling its customers' desire to maintain relationships with environmentally conscious partners. The company has already undergone global validation for the ISO 14064 standard for quantifying and reporting greenhouse gas emissions in 2021. This now covers the entire life cycle of a product and does not end at the factory gate. Tosaf calculates its carbon footprint for the production facilities as a whole as well as for the products themselves and makes the results available to customers on request to calculate their own sustainability figures. Tosaf is also continuously expanding its portfolio of sustainable solutions. Options include bio-based concentrates that use coffee grounds and eggshells as fillers, polymers from renewable sources and recycled polymers. These are supported by a collaboration with recycling plants for various polyolefins and polystyrene.

www.tosaf.com

TOSAF @ 2024, Stand B4-4401



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New PA6 and UHMWPE compound optimizes bridge bearing properties

Better than PTFE and UHMWPE.

Plastics distributor Dreyplas and Spanish company Mekano4 (MK4), a specialist in technical solutions for bridge bearings and post-tensioning, have jointly developed MKSM® a thermoplastic sliding material. It combines excellent wear resistance with heat distortion temperature higher than 80°C and a very low coefficient of friction. Mitsui Chemicals supplies the base polymers for this innovative alloy of PA6 with UHMWPE plus special additives, which has been patented for this application.

MK4's structural bearings are in widespread use in construction and civil engineering, especially in bridges. MKSM transfers very high static loads in bridges, where its outstanding sliding behavior facilitates displacements and, in the case of curved sliding elements, also a limited degree of

rotation in all axes between the bearing-mounted elements and the base structure. Compared to semi-finished product UHMWPE and PTFE, this new sliding material offers enhanced thermal properties, abrasion and heat distortion resistance. Its longer service life, compressive strength, and lower sliding friction can make it possible to use smaller sliding bearings. It can also replace fluoropolymers such as PTFE, which are currently the focus of controversy.

The base sheet with a thickness of 8 mm ± 0.2 mm is manufactured on a horizontal calendar-extruder system by the fabricator SIMONA, in Kirm, Germany. MK4 produces the finished product by cutting the sliding bearing sheets to size and drilling recesses for oil lubrication.

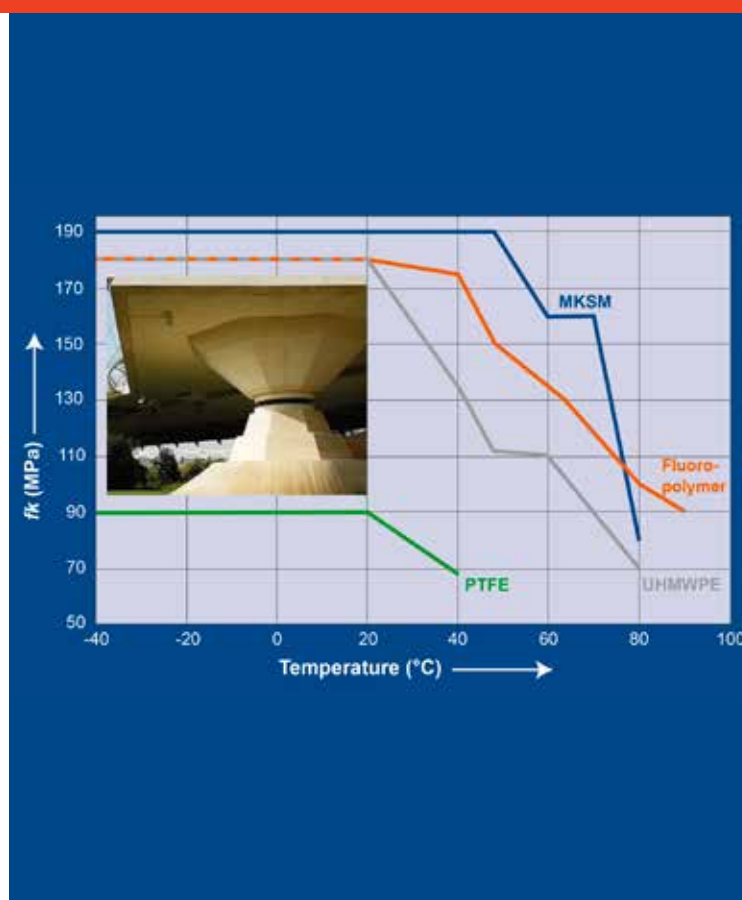
As Dreyplas' Marketing Director Norbert

Hodrius explains, "Where particular requirements have previously meant that there were no alternatives to using fluoropolymers such as PTFE, PVDF etc., this high-performance compound, which is now part of our portfolio, offers advantageous solutions in many cases. Developing special UHMWPE-based compounds of this kind is just one of the services we offer our customers. Our many years of experience and close cooperation with Mitsui Chemicals mean we can use our development and materials expertise to bring products with real added value to market in a short time, as in this joint project with Mekano4."

dreyplas.com

DREYPLAS @ Fakuma 2024: hall B1- Booth 1004

MKSM, a new bridge bearing sliding material, combines and surpasses the positive properties of the UHMWPE semi-finished product and PTFE. © Mekano4 (left) and © Dreyplas (right)



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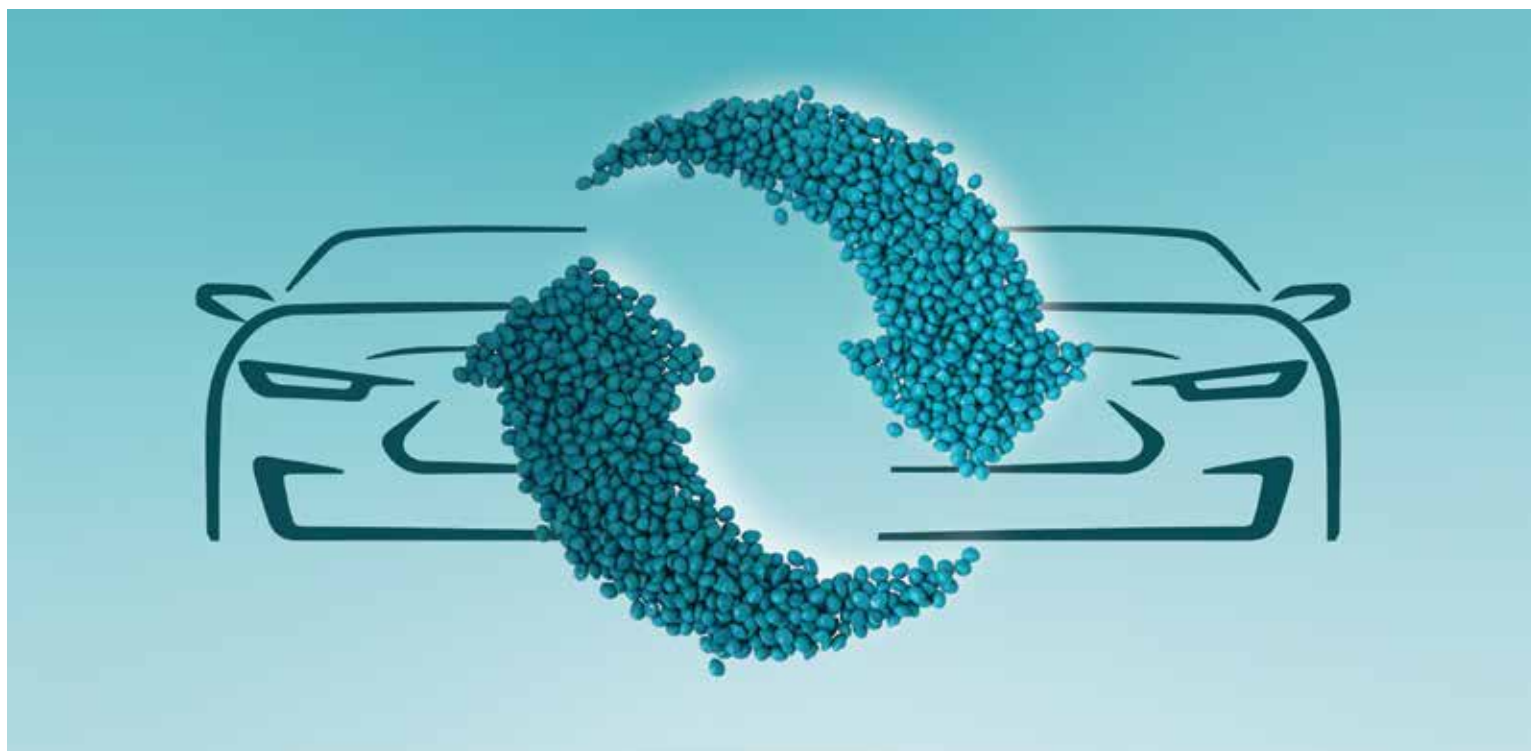
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HEXPOL TPE to present new TPE Technologies with recycled materials at Fakuma

At this year's Fakuma exhibition (Hall B1-1115), HEXPOL TPE will present a further expansion of their Dryflex Circular TPE materials containing post-consumer and/or post-industrial recycled content.



“Our first TPEs with recycled content were sold in 2005, and we're constantly evaluating recycle sources”, commented Dr. Thomas Köppl, Group Product Manager, HEXPOL TPE. “These latest developments are part of our ongoing work to bring TPEs to the market that deliver on performance, product safety and push possibilities using recycled materials”.

TPEs with High Levels of PCR Content

New TPE materials have been developed with higher levels of post-consumer recycle (PCR) content. TPEs with 20 to 75% PCR content are available in hardness range 40 to 95 Shore A. Various colour options are available, including natural. Compared to equivalent virgin TPE grades, these PCR grades enable a product carbon footprint (PCF) reduction of up to 35%.

Adhesion TPE with PCR/PIR Content

Also newly developed are TPEs with recycled content for multi-component applications. TPEs with 35-60% PCR/PIR content that offer adhesion to PP, PA, PC, PC/ABS and other thermoplastics are available. The TPEs have been tested according to the VDI 2019 standard. For example, Dryflex PCR 68.01B270, which will be used for power tools, is a 68 Shore A TPE with 60% recycle, it has fracture pattern D with 5.0 N/mm in peel strength with PA 6.6 GF30.

TPE with Recycled Content for Automotive

HEXPOL TPE supports the automotive value chain to increase the use of recycled materials. New TPEs with up to 75% recycled content (PCR and PIR) are available for several applications, including interior mats and air deflector seals.

TPEs with 25 to 50% PCR sourced from within the

automotive industry are available for exterior applications such as mud flaps and other soft trims. They comply with new targets proposed by the European Commission as part of the End-of-Life Vehicles (ELV) Directive. These TPEs are already in use with several European OEMs. They enable a product carbon footprint (PCF) reduction of around 25% compared to equivalent virgin TPE grades.

TPEs for interior applications, with PCR/PIR content up to 75%, have been tested to automotive standards for odour and emissions. For example, Dryflex PCR 853405 with 85 Shore A and 25% PCR content achieved 3.0 for odour (VDA 270, B3), 65 µg/g for thermodesorption VOC (VDA 278) and 607 µg/g for thermodesorption FOG (VDA 278).

www.hexpolTPE.com

HEXPOL TPE @ Fakuma 2024: hall B1 – Booth 1115

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Servomold at Fakuma 2024: super-precise core pulling units with μm accuracy

At Fakuma 2024, Servomold will be presenting their new, μm -precise SLY core pulling unit, fully assembled and available in various configurations.



At Fakuma 2024, Servomold, a leading specialist in the automation of injection mold tools, will be presenting a new generation of servo-electric core-pulling units of the SLY type, equipped with ball screw drives, which position slides and cores with μm accuracy. To ensure this standard-setting accuracy, their carriage contains precision bores with special fine centering elements for the assembly of universal slides. Another special feature is the linear guides integrated into the units instead of high-maintenance slide guides inside the mold frame. This relocation to the outside enables particularly compact mold dimensions and reduces

maintenance costs.

Typical applications for the cleanroom-compatible linear motion systems are sleeve-shaped parts with the highest quality requirements, for example housings and cartridge holders for medical technology systems such as auto-injectors. All versions are suitable for mounting on both new and existing molds. This means that the latter can be electrified efficiently and in a resource-saving manner as part of a retrofit.

The stroke of the new SLY-S-150 core pull unit is 150 mm, 100 mm for the SLY-S-100 and 75 mm for the SLY-S-075. All versions deliver 6 kN thrust as standard. If required, an optional, easily retrofit-

table planetary gear box doubles this value to 12 kN. The option of mounting different slider bodies on the carriage ensures application-specific flexibility. Other special features include the ability to perform multi-stage movements in order to customize the demolding process, as well as optional motor brakes that hold the system in position in the event of power failures.

Like the servo-electric linear actuators of types SLA and SSA from Servomold, presented at last year's Fakuma, the new units are compact, powerful and clean alternatives to hydraulic and pneumatic cylinders, which are traditionally used to perform translational slide, core or plate movements in injection mold tools. All actuators are controlled via the Servo MoldControl (SMC), which has been available on the market since 2024, with its intuitive touch panel and automatic switching between different encoder systems. Depending on the configuration, the system can control up to eight servo drives.

Thomas Meister, Managing Partner of Servomold, comments: "With the servo-electric drive of the SLY core pulling units and the minimal lubrication of guides and spindles, we fulfil customer requirements that include not only precision and high dynamics but also suitability for use in cleanrooms. On this basis, we are planning to significantly expand our business in the growing market for medical technology devices in the near future."

In addition to the new SLY core pulling units, Servomold will also be presenting its options for developing application-specific solutions and its entire portfolio of cost-efficient, standardized servo system components at Fakuma 2024. In addition to servo-electric single to fourfold unscrewing units and worm unscrewing units for unscrewing threads, this also includes ready-to-use, complete unscrewing halves, powerful servo drive units and linear actuators, space-saving, integrable indexing plate drives, threaded core sets and rotary cooling systems for unscrewing units.

www.servomold.com

SERVOMOLD @ Fakuma 2024: hall A2 – Booth 2111

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HALL A7
BOOTH 7307



Syensqo unveils innovative material solutions at Fakuma 2024

Driving innovation and sustainability across automotive, consumer goods, and e-mobility solutions.

Syensqo, previously part of Solvay Group and specialised in advanced performance materials, will debut at Fakuma 2024 with a comprehensive array of solutions aimed at advancing key applications across industries like automotive, consumer goods, healthcare, and construction.

"Our commitment to innovation, safety, and sustainability is unwavering as we transition into this new chapter as Syensqo," said Georges Houtappel, VP Transportation. "We are dedicated to leveraging our legacy, knowledge, and expertise to support our partners in building a safer and more sustainable future together."

At the core of Syensqo's footprint at Fakuma will be a range of materials that push the limits in high-voltage battery applications and e-mobility electrical components, including:

- Amodel® PPA AE-8945 HFFR, a halogen-free flame retardant polyphthalamide ideal for high-voltage battery pyrofuses requiring a unique combination of superior fire safety, electrical insulation, and mechanical strength.
- Ryton® PPS R-3-410 BL LZT, a polyphenylene sulfide resin optimized for laser welding, enhancing productivity and integrity while facilitating end-of-life recycling in applications such as electric actuator housings and sensors.
- Ajedium™ PEEK film for 800V electric motor slot liners. The polyetheretherketone film can outperform the copper fill and heat dissipation capabilities of traditional aramid paper, help manufacturers downsize e-motor and battery designs and eliminate the conventional cooling system, resulting in more efficient, lighter and more sustainable electric powertrains.

Moreover, Syensqo continues to expand its ECHO portfolio of high performance sustainable solutions engineered with bio-based, recycled, and mass balance certified raw materials to accelerate the transition towards a more sustainable and circular polymer industry, including:

- The first ISCC Plus mass balance certified polysulfone resins in the market, as part of Syensqo's Udel® polysulfone (PSU) and Radel® polyphenyl sulfone (PPSU) offering, providing a reliable way for customers to meet demanding sustainability targets and minimize their Scope 3 emission balance.

- Five new Omnix® ECHO grades, with an ISCC Plus mass-balance (MB) certified recycled content between 33% and 98% percent from post-consumer and/or post-industrial (PCR/PIR) sources, primarily targeted at household appliances and consumer goods.

- Various ISCC Plus mass balance certified Amodel® PPA and Ryton® PPS compounds, particularly targeted at demanding electrical and electronic applications in e-mobility.

- Bio-based Kalix® 2000 Series with a remarkable 41% bio-based high performance polyamide (HPPA) that provides superior structural integrity, aesthetics and reduced moisture absorption for smart device applications.

Progress in sustainability takes dedicated collaboration with customers who share a similar mindset. Two recent examples in the sports equipment segment are partnerships with bicycle manufacturers Trek and Ultima Mobility, using innovative glass-fiber reinforced high-performance polyamide (HPPA) compounds with a very high recycled content to achieve significant reductions in carbon footprint with no compromises in per-

formance or productivity.

As part of its polymer additives offering, Syensqo will also highlight its state-of-the-art CYASORB® and CYASORB CYNERGY SOLUTIONS® stabilizers, engineered to enhance the durability and aesthetics of polymer components across a wide range of applications, from automotive parts and floating solar panels to rotomolded tanks and agricultural films. While providing durable protection against polymer degradation, the benzotriazole-free stabilizers comply with upcoming regulatory standards.

At Fakuma's Exhibitors' Forum, Syensqo will further underscore its materials and market expertise. Visitors are invited to join a live presentation by Ysée Genot, E-Mobility & Sustainability Marketing Manager, and Ricardo Calumby, Construction & Sustainability Marketing Manager, on October 18 at 09:40 CET in Room Berlin, where they will present Top-Notch Circular Polymers: Experience Uncompromised Performance with Syensqo.

www.syensqo.com

SYENSCO @ Fakuma 2024: hall B4 – Booth 4213



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sensXPERT: Pioneering real-time solutions for recycled polymer processing

The company will showcase at booth B5-5412 its cutting-edge Digital Mold technology, designed to enhance production efficiency and quality through real-time process monitoring and optimization.

Avidens is a pioneering initiative that addresses the challenges of processing recycled plastics in technical components. With the growing emphasis on sustainability and the circular economy, ensuring consistent part quality when using recycled materials has become a critical concern. Fluctuations in material properties from batch to batch or even cycle to

cycle can lead to inefficiencies and compromised product quality.

Avidens tackles this issue by integrating advanced sensor technology, process engineering, and data processing. The consortium, consisting of sensXPERT, Schwarz Plastic Solutions, NETZSCH Analyzing & Testing, and Precupa, focuses on real-time detection of anomalies with-

in the molding process using newly developed dielectric analysis (DEA) sensors. These sensors provide detailed insights into the polymer's behavior inside the mold, allowing immediate in-line adjustments to optimize process efficiency and maintain high-quality output. By leveraging this technology, Avidens sets a new standard for the effective and sustainable use of recycled polymers in manufacturing.



Live on stage: Revolutionizing recycled plastics with AI and sensor technology

As part of the event, Dr. Alexander Chaloupka, CTO of sensXPERT, will deliver a presentation titled "AVIDENS: Assured Component Quality with Plastic Recyclate Thanks to In-Mold Sensor Technology and AI." This session will take place on Wednesday, October 16th, 2024, at 1:10 PM in Room Berlin.

Here, Dr. Chaloupka will discuss the upcoming challenges posed by the European Green Deal, specifically the new minimum recycling quotas for technical plastic components that will take effect in 2025. The talk will focus on how live sensor data from inside the mold, combined with AI, can improve the quality of parts made from recycled materials, ensuring consistent, high-quality production despite material variability.

Discover innovation in Action at the sensXPERT Booth

At Fakuma 2024, sensXPERT, in collaboration with its long-standing partner Schwarz Plastic Solutions, will present new customer success stories and demonstrate the advanced capabilities of its Digital Mold solution. Visitors will have the opportunity to see firsthand how this cutting-edge technology can streamline production processes, enhance product quality, and reduce waste in plastics manufacturing.

www.aprioripr.com
sensXPERT @ Fakuma 2024: hall B5 –
Booth 5412



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BOY will present a highlight at Fakuma 2024

At Fakuma 2024 BOY will present a total of six exhibits of the entire clamping force range from 100 to 1250 kN in Hall A7, booth 7101.

B OY Electric series in a new machine design

Three models of the new BOY Electric series will be presented for the first time at Fakuma: the BOY 35 Electric, the BOY 50 Electric and the BOY 80 Electric. The clamping force ranging from 350 to 800 kN offer numerous features that increase the precision and, depending on the kind of application, the efficiency during the injection moulding process. For example, the drives for injection, dosing and the ejector as well are electromechanically designed.

The BOY Electric series has also been given a new machine design, which is not only charac-

terised by its new optics. The drive and inverter technology is integrated in the smallest possible space and still permits numerous expansion options. The accessibility has also further been improved.

The new Electric machines are characterised by their high positioning accuracy and offer the option of actively braking the screw movement and thus also recovering energy for subsequent movements. They also persuade with their impressively quiet running, which ensures a pleasant working environment.

Another highlight of the new series is the parallel movement without a double pump, that allows

an efficient and precise production. The BOY Electric machines also captivate by their compactness and thus combine the advantages of an electromechanical machine with a space-saving design of two-platen clamping units.

"We are looking forward to many exciting discussions and to welcoming both familiar and new 'faces'. In addition to our proven highlights, we are pleased to present our new BOY Electric series" comments Alfred Schiffer, Managing Partner of Dr. Boy GmbH & Co. KG.

www.dr-boy.de

BOY @ Fakuma 2024: hall A7 – Booth 7101



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MAKTEK AVRASYA, the region's largest machine tools sector event, kicks off on 30 September

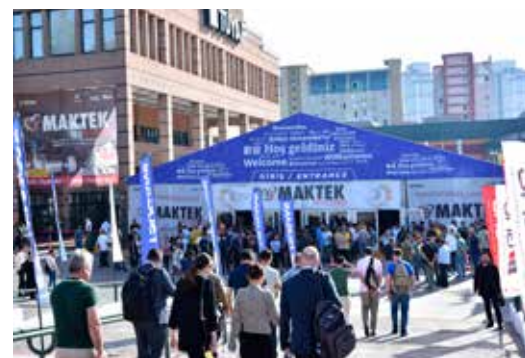
Showcasing Digital Transformation and Sustainable Design.

The 8th edition of MAKTEK AVRASYA will take place at the Tüyap Fair and Congress Center in Istanbul from September 30 to October 5, 2024, bringing together the world's leading companies and the most important brands in the machinery industry.

MAKTEK AVRASYA, short for the International Machine Tools, Metal - Sheet Metal Processing Machinery, Holders - Cutting Tools, Quality Control - Measurement Systems, CAD / CAM, PLM Software and Production Technologies Fair, has already completed 99 percent of booth sales. Currently, there are more than 1,000 companies and company representatives participating.

Unlocking new market opportunities in Türkiye

The benefits of participating in MAKTEK AVRASYA are evident from the previous fair in 2022, where 51 percent of exhibitors strengthened existing business contacts and 56 percent gained new potential customers from Türkiye. This year, they aim to exceed these impressive numbers. With over 85,000 visitors expected from 90 countries, including Egypt, Algeria, Saudi Arabia, North Africa, Russia, Germany, Italy, Poland, Canada, France, Hungary, and the Netherlands, exhibitors will have unparalleled opportunities to expand their reach. Special invitations and a buyer delegation program organized by Tüyap's foreign offices will further attract



numerous industry professionals, enhancing networking and business opportunities.

This year's theme, "Digital Transformation", will feature a Digital Transformation Experience Zone where visitors can explore new technologies and advancements in the manufacturing industry. The Start-up Zone will provide a platform for new players in the sector to meet international leaders and pursue new collaborations, helping them advance their initiatives. The fair will also host the "Open Design Istanbul Design Competition", organized by TIAD.

Fostering innovation with awards

Exploring the concepts of "Designing for Sustainable Industries" and the "Robotic Loading/Feeding System Design for CNC Machine Tools", the competition encourages cooperation between industrial designers and industrialists. Awards will be presented on the first day of the fair, September 30, 2024, and the finalists' designs will be displayed in a special digital showroom area in Hall 12A.

Visitors can obtain free online tickets from www.maktekfuari.com until July 15. After this date, on-line tickets and on-site registration will incur a fee. The fair will be open from 10:00 to 19:00 on the first five days and from 10:00 to 18:00 on the final day.

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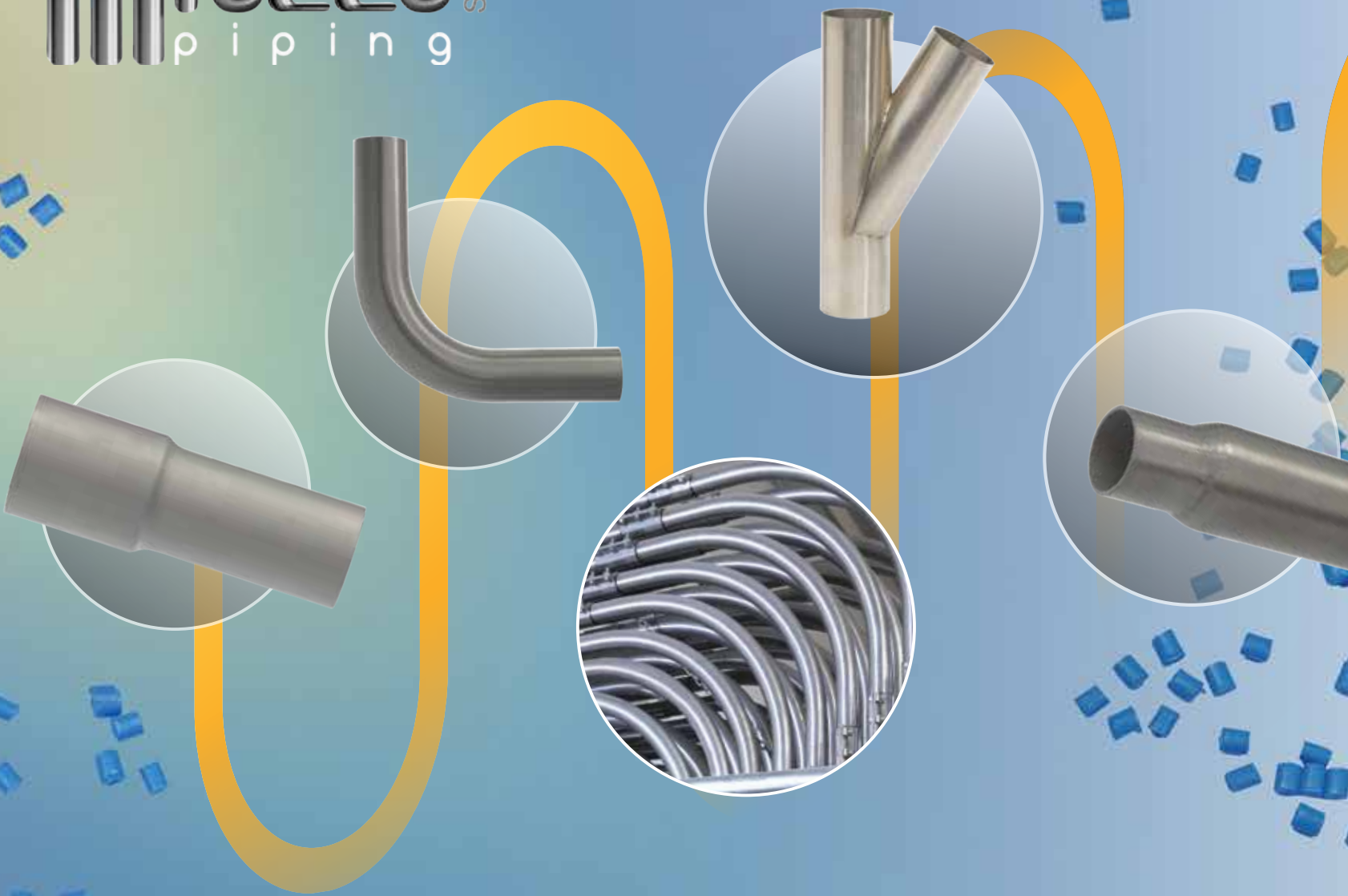
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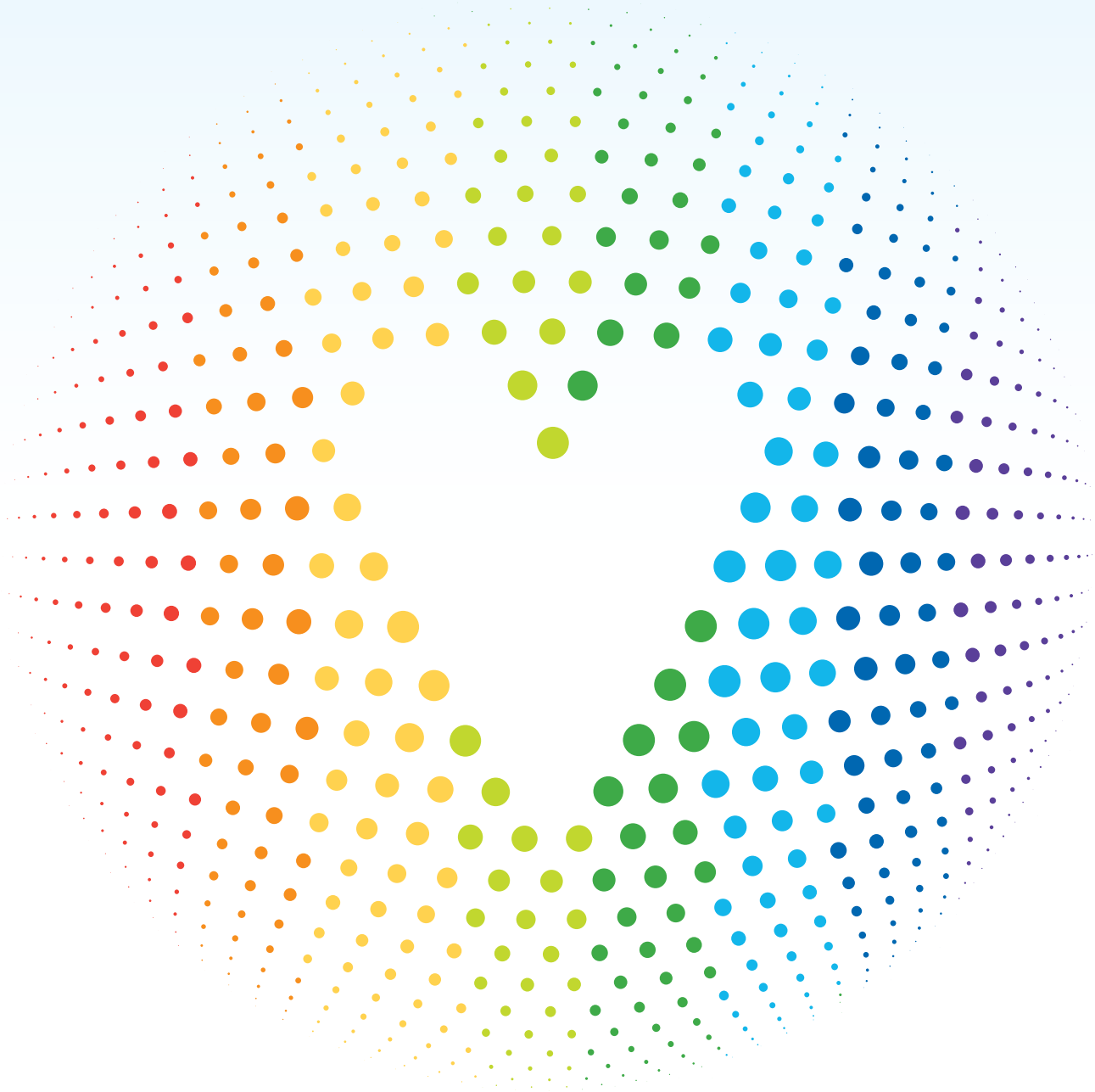
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