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The Monthly Magazine for the Plastics Industry

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Tel. +49 2392 9644-0 - Fax +49 2392 62013
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info@mixaco.com

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The Monthly Magazine for the Plastics Industry

Tecnova E180-45D double degassing machine – page 26

FV32/112HP CORRUGATOR

ITIB MACHINERY is delighted to talk about its new high-performance corrugator, the fastest of its range, particularly suited for all the markets who need no compromise, high speed production of small diameter pipes.

The name FV32/112HP summarizes all its main features: FV identifies the vacuum forming system, 32 the pipe maximum outer diameter in mm that can be produced, 112 the number of pairs of moulds that make up the chain and, finally, HP is the abbreviation of high performance.

In fact, the main target was to design a corrugator in such a way that it was able to fully exploit the potential of modern extruders and coiling systems, moving any bottleneck in the production line far from the corrugator.

Of course, extreme performance cannot be at the expense of re-

liability, accessibility, ease of use and quality of the final product.

The attention paid to all these aspects by the technical department of ITIB Machinery emerges clearly in the design and technical solutions adopted in the new, super-fast corrugator.

FV32/112HP 瓦楞机

ITIB MACHINERY 很高兴向您介绍其新推出的高性能瓦楞机，这是该系列中速度最快的一款，特别适用于所有需要高速生产小直径管材的市场。



Long-awaited return to Shanghai after six years
Rising Expectations to CHINAPLAS 2024 from the Industry

China's economy is showing signs of quick recovery while Asia acts as the locomotive of the global economy. CHINAPLAS 2024 will be held from April 23 - 26, 2024, occupying all 15 exhibition halls of the National Exhibition and Convention Center (NECC) in Hongqiao, Shanghai, PR China, with a total exhibition area of over 380,000 sqm. It is ready to receive more than 4,000 exhibitors from around the world.



时隔六年重返上海，期待已久
业界对 CHINAPLAS 2024 寄予厚望

中国经济呈现快速复苏迹象，亚洲成为全球经济的火车头。随着经济持续回暖，被视为经济晴雨表的会展业也迎来强劲复苏。继 2023 年取得骄人成绩之后，CHINAPLAS 2024 将于 2024 年 4 月 23 日至 26 日在中国上海虹桥国家会展中心（NECC）的全部 15 个展馆举行，展览总面积超过 380,000 平方米。届时将有来自世界各地的 4,000 多家企业参展。

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On the Chinese way

Marco Mastrosanti

TecnoEdizioni with the magazine Tecnoplast is back in China: after the Covid parenthesis, we are ready for one of the most important exhibitions in the world for the plastics sector. And China is ready to welcome us, so much so that since last December it has decided to grant visa-free travel to six countries, including Italy. Italians (and others) will be able to cross the border without a visa until 30 November 2024.

The aim is to encourage more people to visit the country for business and tourism. And - judging by the numbers of Chinaplast 2024 (now in its 36th edition) - the strategy is effective. There will be more than 40 Italian companies that will make up the national collective organised by Amaplast. At least twenty other Italian companies will participate through the stands of their agents or local branches. An important presence, to preside over a particularly strategic area for the volume of business it represents and to increase business opportunities at a time when China is recovering after the difficulties of recent years.

In 2023, in the face of a complex international context and challenging national reform, development and stability programmes, the Chinese economy withstood external pressures, overcame internal difficulties and, overall, showed a positive trend.

The plastics processing sector was no exception, with modest but steady and gradual growth. According to the National Bureau of Statistics, in 2023, the sector produced just under 75 million tonnes of finished products, an increase of 3% over 2022.

Also in 2023, exports of Italian-made plastic and rubber machinery to China touched the 170 million euro mark - an all-time record - with an increase of twelve percentage points over 2022.

Moreover, the share of sales of complex, high value-added technologies, such as extrusion lines and mono-multifilament plants, whose demand from the Chinese market has increased considerably in recent years and cannot be satisfied by local manufacturers, both in terms of quantity and, above all, quality.

Happy Chinaplast 2024 and good business in China to all Italian companies!

中国之路

TecnoEdizioni 和 Tecnoplast 杂志再次来到中国：在经历了科维德事件之后，我们已经准备好迎接全球塑料行业最重要的展会之一。中国已经做好了欢迎我们的准备，以至于从去年 12 月起，中国决定对包括意大利在内的六个国家实行免签证旅行。在 2024 年 11 月 30 日之前，意大利人（和其他人）将可以免签过境。

这样做的目的是鼓励更多的人到中国经商和旅游。从 2024 年中国国际橡塑展（现为第 36 届）的参展商数量来看，这一战略是有效的。将有 40 多家意大利公司组成由 Amaplast 公司组织的全国集体。至少还有 20 家意大利公司将通过其代理商或当地分支机构的展台参展。

在中国经历了近几年的困难之后，正处于复苏阶段，在这样一个具有特殊战略意义的地区举办这样的展会，将有助于增加商机。

2023 年，面对复杂的国际形势和严峻的国家改革、发展和稳定大局，中国经济顶住了外部压力，克服了内部困难，总体呈现出积极向好的态势。

塑料加工行业也不例外，实现了小幅但稳定的逐步增长。根据国家统计局的数据，2023 年，该行业的成品产量略低于 7500 万吨，比 2022 年增长 3%。

同样在 2023 年，意大利制造的塑料和橡胶机械对中国的出口额达到了 1.7 亿欧元大关，创下了历史新高，比 2022 年增长了 12 个百分点。

此外，复杂的高附加值技术，如挤出生产线和单多丝设备的销售份额也进一步加强或巩固在较高水平，近年来，中国市场对这些设备的需求大幅增加，无论是在数量上还是在质量上，尤其是在用于生产高端产品的情况下，本地制造商都无法满足这些需求。

此外，预计到 2024 年第二季度，中国塑料加工业的扩张速度可能会明显加快。此后，预计第三季度和第四季度的增长率将有所下降，但会保持稳定。

祝 2024 年中国国际橡塑展圆满成功，祝所有意大利公司在中国的业务蒸蒸日上！

tecno Plast

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Publisher

Marco Mastrosanti
(marco.mastrosanti@tecnoedizioni.it)

Managing Editor

Cecilia Cantadore
(c.cantadore@tecnoedizioni.com)

Office Secretariat

(traffico@tecnoedizioni.com)

Marketing department

(marketing@tecnoedizioni.com)

tecnoEdizioni
Group

Sales department

Filippo Cavaliere (f.cavaliere@tecnoedizioni.com)
Giovanni Paura, Teresa Alessi

Contributors:

Marilena Del Fatti, Alessandro Mastrosanti, Gaia Mastrosanti

Graphic coordination

Giulia Rosa
(grafica@tecnoedizioni.com)

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T +39 0422 750111
E-mail: info.hrsflow@oerlikon.com
www.hrsflow.com

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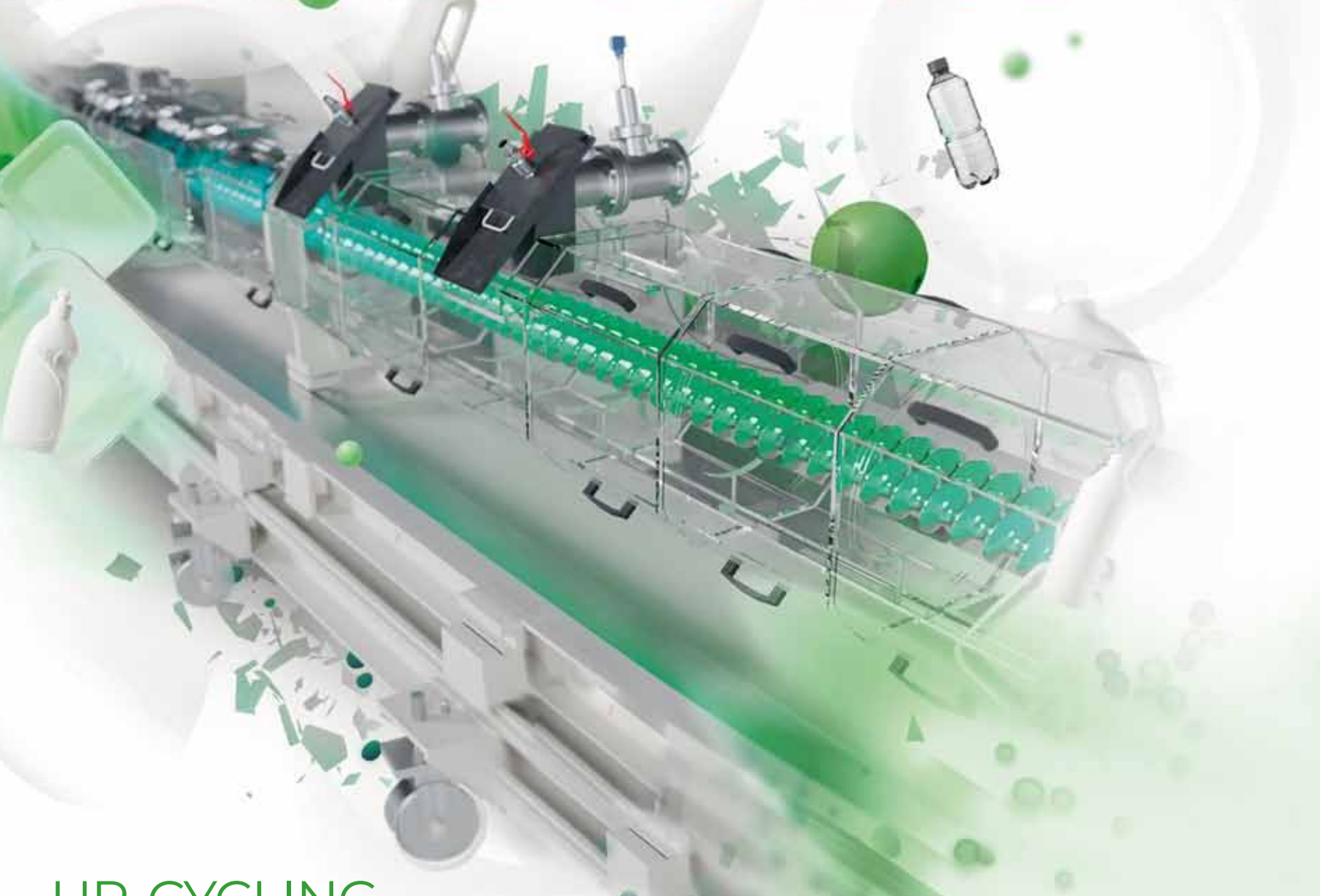
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Plastic recycling for the production of medical grade polymers

SABIC & Jessa Hospital achieve successful step towards creating circular polymers based on advanced recycling of used medical plastic

SABIC, a global leader in the chemical industry, has successfully demonstrated the feasibility of recycling used medical plastic back into the medical materials stream. The project was initiated together with the dialysis department at Jessa Hospital, one of the largest non-university medical clusters in the Limburg region of Flanders, Belgium. Serving as a pilot proof-of-concept, used medical plastic generated at Jessa's hospitals was converted to pyrolysis oil in an advanced recycling process, delivering circular feedstock for SABIC's production of TRUCIRCLE™ polymers in medical grade quality with same performance, purity and physiological safety as virgin-based medical grade polymers. This is indispensable for medical approvals by regulators.

Lada Kurelec, General Manager, Polymers Technology & Innovation at SABIC, states: "Working with Jessa Hospital has been an immensely rewarding experience, where we learned how individual belief in circularity can mobilize industry to work together. I value how this collaboration enabled creation of an ecosystem to collect and recycle non-contaminated medical waste in a very short time. Thanks to this collaboration, we are creating a certified circular TRUCIRCLE polymer portfolio able to serve the

healthcare market. We are inviting other players in the value chain to join us and Jessa in this groundbreaking initiative to accelerate the circularity of plastics in the medical industry."

Advanced recycling technology and the vast experience gained through its TRUCIRCLE solutions put SABIC in a strong position to provide a circular solution designed to help Jessa Hospital reduce the environmental footprint of its medical products by avoiding their incineration after use. Approximately 85% of the used medical plastic generated at the hospital is not contaminated and therefore requires no specialized treatment. This allows it to be repurposed as feedstock for advanced recycling and subsequent production of high-quality medical grade polymers, saving virgin raw material and contributing to a more circular medical economy. Karl Zwinnen, Project Engineer at Jessa adds: "We are very pleased with the advanced and circular recycling approach enabled by SABIC to improve our medical waste management. The setup of an efficient collection system for used medical plastic has met with strong support among our medical and healthcare staff. Besides contributing to enhanced sustainability and circularity, the solution also has an enormous potential for reducing our

disposal costs. We look forward to implementing it across all Jessa locations."

As a result of this successful pilot project, SABIC is currently in the process of actively engaging partners to scale up operations and create a fully closed-loop recycling model for used medical plastic in larger volumes.

SABIC's certified circular materials are produced using mass balance accounting according to the International Sustainability & Carbon Certification (ISCC) PLUS program, which defines a set of transparent rules for tracking the material flow across complex supply chains from the feedstock to final applications. The resulting certified circular polymers form part of the company's TRUCIRCLE portfolio and services.

SABIC's TRUCIRCLE portfolio and services include certified circular polymers as well as design for recyclability, mechanically recycled products, certified renewable polymers from bio-based feedstock, and closed loop initiatives to recycle plastic back into high-quality applications and help prevent valuable used plastics from becoming waste.

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HERMA joins RecyClass, the European initiative driving plastic circularity

The cross-industry RecyClass initiative drives the recyclability of plastic packaging and promotes a harmonized approach toward recycled plastic calculation and traceability in Europe.



The circular economy of plastics is of key importance for European economies and businesses to achieve their sustainability goals. As a technology-leading specialist in self-adhesive materials, HERMA has now joined RecyClass as a Platinum Member. This is a comprehensive cross-industry initiative that drives the recyclability of plastic packaging whilst at the same time promoting the traceability of plastic waste and recycled plastic content in Europe. HERMA joins the more than 100 RecyClass members, which include global players such as Aldi, BASF, Bayer, Ferrero, Nestlé, L'Oreal and Pepsico. „As a cross-industry initiative, RecyClass brings together players from the entire plastics value chain to optimise the recyclability of plastic packaging and the uptake of Coatings and Special Coatings. To this end, RecyClass not only offers robust certifications, but is also working on the development of scientific testing methods for innovative materials.

The testing RecyClass Design for Recycling Guidelines and the free RecyClass Online Tool. The latter provides manufacturers and users of plastic packaging with a quick assessment of the recyclability

of their packaging and guidelines on how to improve it. “RecyClass conveys knowledge and creates both transparency and trust, thereby providing reliable orientation for all players. We are very proud to be an active member of the RecyClass community,” emphasises Dr. Stefan Kissling. “We are very interested in using the expertise of the RecyClass community to further develop our product portfolio and to use it to advise our customers. After all, our aspiration is to be truly sustainable. Finding ways to make materials even more resource-friendly and recyclable is essential to reach this goal.” “RecyClass is also pleased to have on board another member with profound application knowledge, both about the use of recyclable plastic films and film labels,” emphasises Paolo Glerean, Chairman of RecyClass. “HERMA is a leading European player in the field of self-adhesive materials, we are extremely proud to see them engaged in the journey towards circular plastics.”

A short profile of HERMA

HERMA GmbH, with its headquarters in Filderstadt, is a leading European packaging and product

labelling specialist. The Group achieved a turnover of around €510.6 million in 2022 in three business divisions with over 1,100 employees.

www.herma.co.it

About RecyClass

RecyClass is a non-profit, cross-industry initiative advancing recyclability, bringing transparency to the origin of plastic waste and establishing a harmonized approach toward recycled plastic calculation & traceability in Europe. RecyClass develops Recyclability Evaluation Protocols and scientific testing methods for innovative plastic packaging materials which serve as the base for the Design for Recycling Guidelines and the RecyClass Online Tool. RecyClass established Recyclability Certifications for plastic packaging, Recycling Process Certification and Recycled Plastics Traceability Certification for plastic products.



THINK DIFFERENT TO CREATE INNOVATION



MAGIC MP S.P.A.
Via G. Puecher, 24 20842 Besana in Brianza (MB) - ITALY
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B(1)ack to white

ULTRA SYSTEM, a name that over the years has become synonymous with excellence, optimization of color change processes, material changes, preventive maintenance, machine downtime, but above all synonymous with waste reduction. Thanks to the correct use of ULTRA PLAST, latest generation purging compounds, all this was and it's still possible.

The main target of Ultra System is to help thermoplastic materials processors to reduce the time for a color/material change, quickly, effectively and above all without waste.

As everybody knows in the recent years the use of scouring products has grown exponentially, synonymous with the awareness on the part of processors that waste is no longer acceptable and that quality still makes the difference.

Of course, the quality itself that our technicians have achieved in the formulations of ULTRA PLAST plays the fundamental role.

Materials without any abrasive ingredients, without the need of soaking time, without smoke neither bad smell during the purging operations, fast and efficient, with over ten certifications each, this is what our customers obtain by working with Ultra System.



Constantly informed on the latest developments in terms of polymers and masterbatches, ULTRA SYSTEM technicians develop and adapt existing ULTRA PLAST products to specific needs, creating "tailor-made" solutions and materials.

Thanks to the network of distributors and agents throughout the world, a widespread presence and closeness to customers is possible, guaranteeing, when possible, the presence of our technicians at the first application test, also carrying out training activities for the operators.

A recent test which has been performed on a well-known extrusion blow molding machine, producing tanks on HDPE, demonstrated how the color change from black to white, usually one of the most difficult and time-consuming, can take place in a very short time using the Ultra Plast grade PO-E-CS, specific for EBM for a deep cleaning of the screw.

The customer usually took more than 6 hours to complete the color change process and it was necessary to use tons of virgin material, resulting in a considerable production of waste.



By using only 20 kg of the product PO-E-CS the time was reduced to just 45 minutes and the result was perfect.

Of course, and it couldn't be different, Ultra System has always been sensitive to the green arguments, setting the waste reduction as its primary target, drastically reducing the time needed for a color change or a change of material, consequently reducing the amount of energy used and therefore less carbon footprint.

A good use of purging compounds and a professional recycling of waste can therefore avoid high production costs and unfavorable consequences for future generations.

Ultra System has also always and constantly listened to market demands, has managed to develop cutting-edge materials and has established col-

laborations with companies producing machines, moulds, hot-runners and raw materials; the circle is therefore closed.

This year Ultra System will celebrate its 20 years, 20 years of innovations, studies and research, tenacity, entrepreneurial spirit, innovation and modern vision, which have never been lacking in the two entrepreneurs who in 2004 joined forces and created an ambitious project, which in 2010 was joined by a third person, creating an innovative and solid company. Ultra System has been able to maintain and evolve its passion over the years, transferring it not only to its collaborators, but also to agents and distributors all over the world, thus becoming a lighthouse and a fixed point within the world of plastics.

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Magic MP: industrial machines, the future is now!

Magic has presented during the Open House in November the revolutionary FULL ELECTRIC ACCUMULATOR MACHINE with patented head and clamping.

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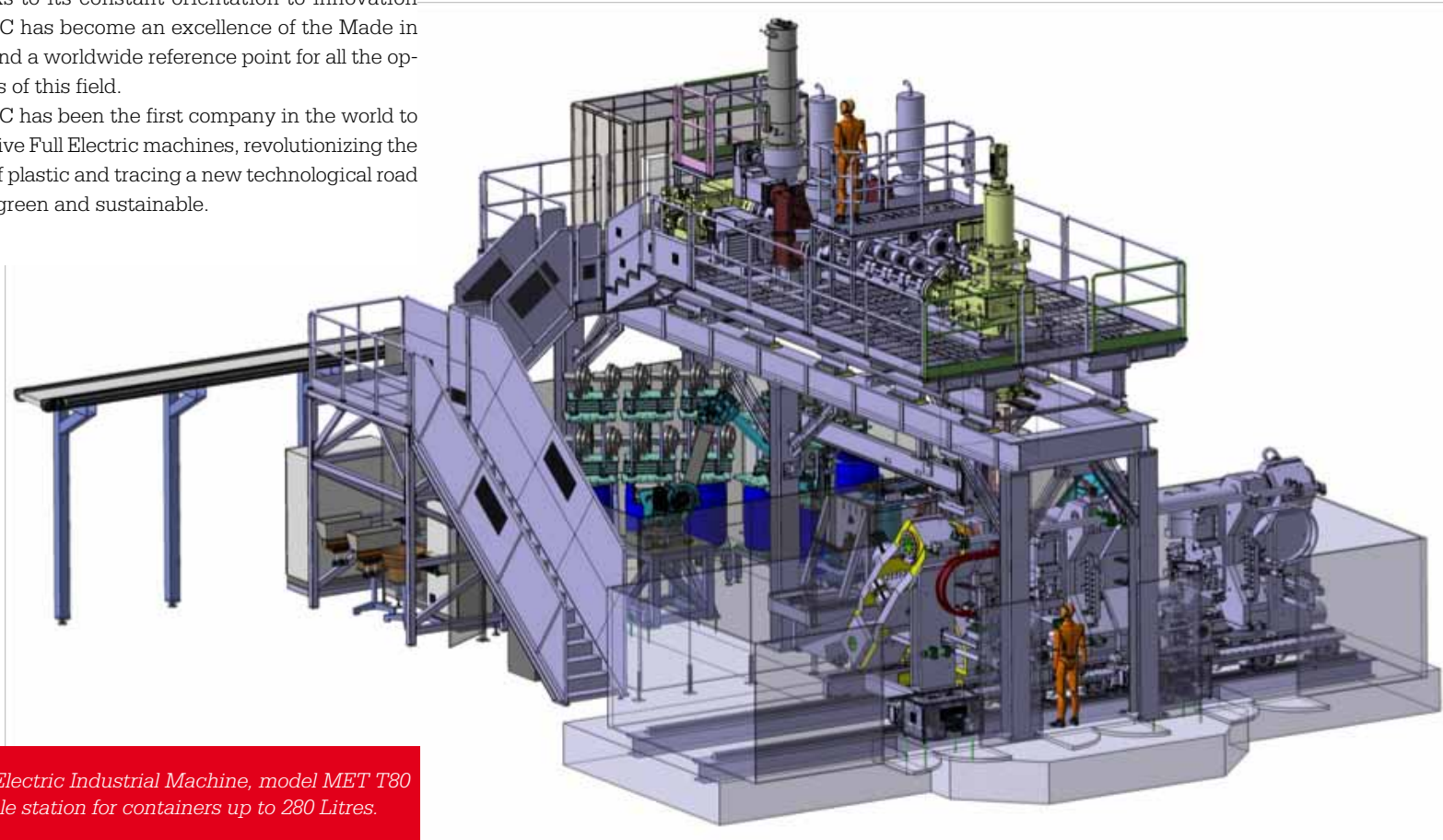
- Reduction of consumption equal to -53%;
- Maximum precision of the movements. Consequent efficiency equal to 99% with a perfect repeatability of the working cycles, potential reduction of the working cycle and potential reduction of the weight of the articles to be produced;
- Reduction of the maintenance costs equal to -52%;
- Machine completely Oil free;
- Very silent machine since it is free of hydraulic pumps.

Magic MP S.p.A. is an italian company founded in 1959, specialized in the conception and construction of extrusion blow moulding machines (EBM) and injection, stretch and blow moulding machines (ISBM) of plastic materials.

Thanks to its constant orientation to innovation MAGIC has become an excellence of the Made in Italy and a worldwide reference point for all the operators of this field.

MAGIC has been the first company in the world to conceive Full Electric machines, revolutionizing the field of plastic and tracing a new technological road more green and sustainable.

All Electric Industrial Machine, model MEA T40 presented during the Open House in November 2023.



Full Electric Industrial Machine, model MET T30 double station for containers up to 280 Litres.

The clients recognize in the MAGIC machines patented technological benefits, which turns into real process improvements and consequent profit increases.

Investments and efforts to give to their actual and future clients a unique and solid contact point in the production of bottles: machines, moulds and packaging solutions. Everything is internally developed and produced and commercialized with the best value for money on the market.

These investments confirm the continuity of principles, values and skills that distinguish the Magic Group from more than 60 years.

With his words reported below the President of the Magic Group, Mr. Ferruccio Giacobbe, devotes the landing of his company in the planet of Industrial Machines and he does it always in an innovative and futuristic way.

"Innovation is and always will be the engine that fuels growth and development of Magic.

Since until today no one in the world has ever built a completely electrified accumulator head of big size, Magic, which always looks ahead, driven by this philosophy, has understood that, even in the field of Industrial Machines, the complete electrification will become a determining and indispensable factor.

We did it in the past with the continuous extrusion technology for machines up to 60 Tons for the production, per example, in 6+6 cavities for 5 litres containers; we do it today also with the Industrial Machines for containers up to 280 litres. Soon we will do in fact a second Open Day to show the world the new Transfer machine with all electric technology of 80-100 Tons for containers up to 280 litres. This machine will have an incredible saving for our clients in terms of energy consumption equal to almost 180.000 Euro per year.

We are led to think that electrification is all about the necessity of the energetic economy. But this is one of the aspects, even though very important. The electric motor means also more precision and repeatability in the execution of the movements, that impacts on the efficiency of the machine, in lighter articles and shortest working cycles and with less wastes.

It will be easy for our clients to understand how advantageous and innovative is to produce with a machine which consumes 50-60% less, that thanks to its stability allows shortest working cycles and allows to produce lighter articles and, even more, with reduced maintenance costs of 50%.

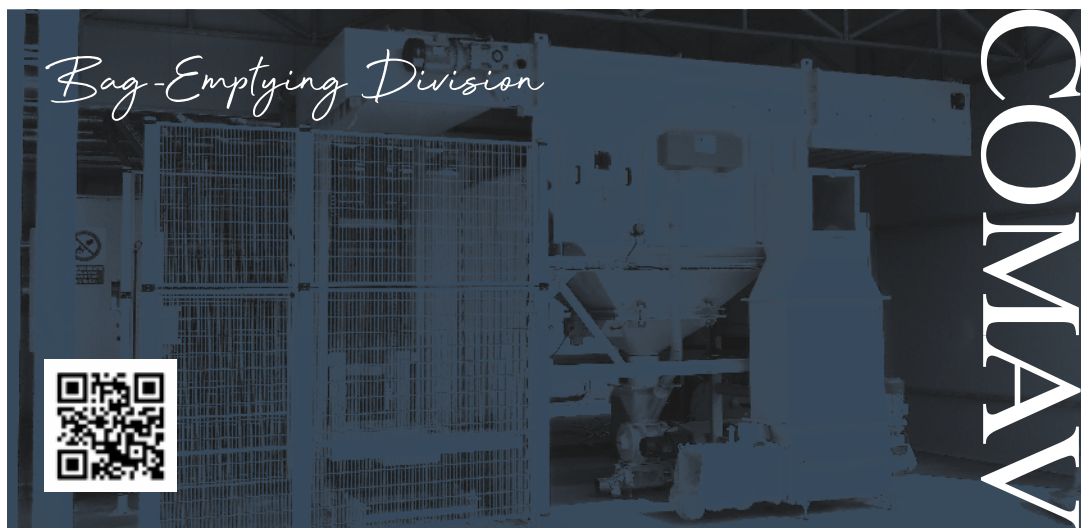
We are sure that orientation to "Green", to be effectively implemented, must bring to our clients even advantages in terms of profit. In fact in 25 years and 1800 electric machines sold as well as having "saved" almost 3 billions of Kg in CO2, our clients have saved more than 500 million euro in electric energy. To these many various millions must be added for the economy in maintenance costs.

"We want our clients, with our patented technology, win the complexe challenge of the market; we aspire to become their partner, grow with them and become their reference point in the field."

www.magicmp.it

MIX

Mixing Division



Bag-Emptying Division



COMAV

part of

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GROUP

The perfect mix of solutions for your needs



Storing Division



Dosing Division



PLASCO

Automatic dosing system for pigments and additives materials

Color Service is a company specialized in the manufacturing and development of Automatic Dosing Systems for powder and liquid products for compound and masterbatch preparation.



The company's technology is developed to solve problems associated with the manual weighing of pigments or additives and it is designed with the aim to abandon traditional production methods that inevitably would not allow to get a safe, fast and precise dosing. The necessity of uniformity on the finished products is essential for all kind of industries and weighing

finish, to effectively reduce the overall production process time, lower the number of workers required, and eliminate the safety risk of operators working in terms of human expositions to dangerous raw materials.

In fact, from a sustainable point of view, Color Service has designed an innovative Anti-Dust Kit installed on each dosing head, a completely closed and aspirated system able to guarantee zero emissions in the work environment, aspirating the released dust during the dosing phase. Furthermore, the aspirated product is recovered and reintroduced into the production cycle with obvious environmental and economic benefits. The company's highest priority is to substantially minimize environmental hazards reducing pollution and material waste to create a sustainable finished product for the customer.

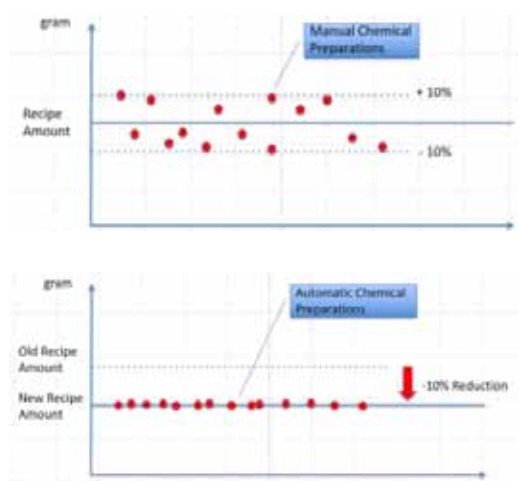
A certified weighing system ensures the most accurate calculations while dosing chemicals, and a modular design allows for future modifications. It tracks the status of each recipe while it is being prepared, and every bag is labelled with a thermal transfer printed label that provides traceability to the whole cycle and process. To ensure there are no mechanical flaws or malfunctions, strict quality assurance is maintained during the system's manufacturing. All components are run through electrical and PLC tests to check for proper functioning before they are dispatched to the client. System's accuracy is verified at their facility by testing cycle time and Cpk's using their products to ensure proper implementation. Customized software programs are developed internally at Color Service to integrate with client's existing systems.

Color Service further assists clients with 24/7 service. Operating from technological centers in America, Europe, and Asia, it guarantees customized services based on needs, worldwide and at any time, such as data monitoring and system performance, the implementation of new technological features and preventive maintenance.

Due to its decades-long experience, Color Service has mastered the art of staying ahead of the curve with innovation at its heart. Its ideology is to improve production efficiency through innovation, and the driving force for its R&D division is derived from the ideas, wants, and needs of its customers.

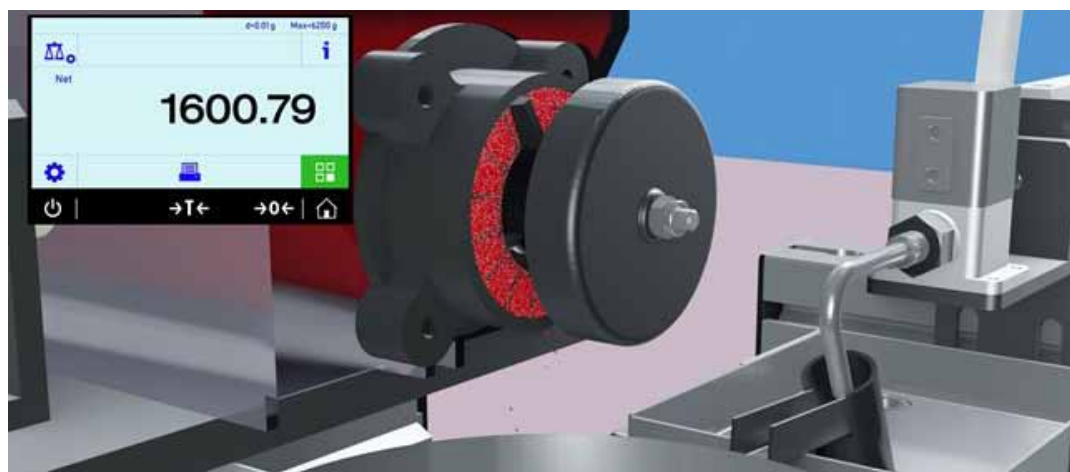
Color Service's methodology of keeping customers in mind when crafting highly efficient and innovative solutions gives it an exceptional edge in the market and enables it to be a world leader in the production of automatic dosing system.

www.colors-service.net



raw materials may be a error-prone operation. This is where Color Service steps in with its fully automated dosing system.

The equipment sits in the middle of the production line and automates the entire dosing process, with loading of raw materials being the only manual task. It can manage the raw materials from start to



ENDLESS LIVES



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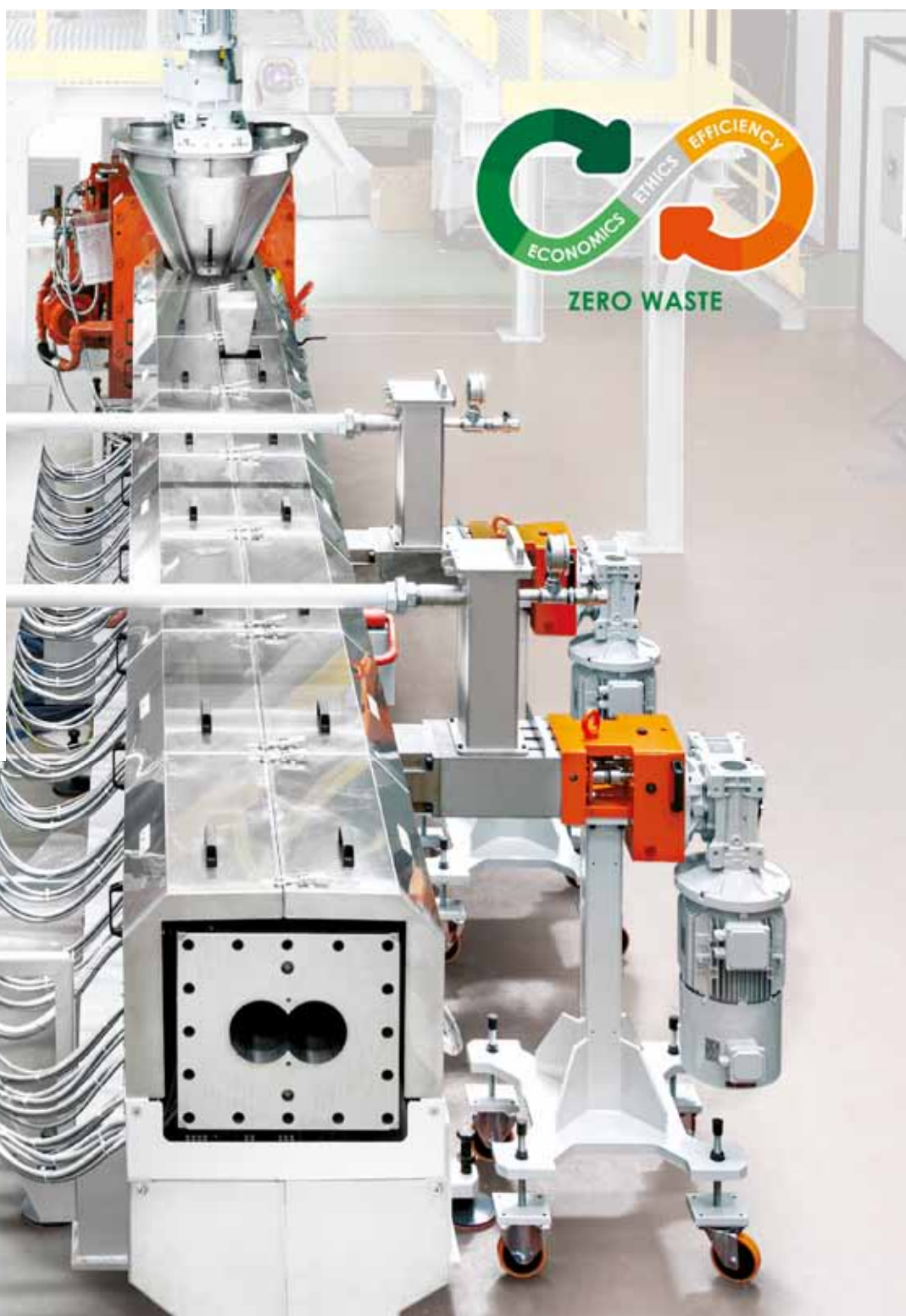
ICMA San Giorgio: a story of innovation in extrusion and compounding

ICMA SAN GIORGIO is an Italian manufacturer of lines for the extrusion and compounding of plastic and rubber materials, founded in 1945 by the Colombo family and part of a group with over 100 years of industrial history rooted in the upper Milan area.

ICMA immediately began its activity as a manufacturer of industrial machinery, initially for wood, subsequently, a few years after the development of polypropylene by Prof. Giulio Natta, for plastic extrusion plants immediately equipped with twin-screw extruders.

There are many “milestones” that have marked the success of ICMA on the national and international markets. We remember in the early Seventies the twin-screw extrusion systems linked to the “Woodstock” patent which brought ICMA to the international limelight as a manufacturer of “direct” extrusion lines (i.e. starting from raw materials) of composite materials, in particular plastic / wood, which found great application in one of the most demanding and technical sectors, the automotive one. Starting from the 1980s, the company decided to give great impulse to the development of co-rotating twin-screw extruders with important results in the compounding sector in various application fields, from techno polymers to the very current so-called “green” (typically biopolymers and mechanical and chemical recycling of post-consumer plastics) and rapidly expanding sectors, linked to global megatrends, such as cables and electronics in general.

Today ICMA boasts a unique engineering capacity



and a complete portfolio of plant solutions based on the latest generation co-rotating twin-screw extruders in the sectors of compounding and direct extrusion of high-tech sheets and films (identified, in international terminology, as in-line compounding or direct extrusion) performed according to specific customer needs and characterized by high efficiency and production yield.

ICMA has always boasted a first-rate industrial capacity distributed over a production area of approximately 10.000 m2 divided into 3 factories with production, mechanical processing, and assembly departments, both mechanical and electrical, and after-sales assistance activities, a stainless pillar of its business model and executed by a highly experienced and qualified personnel. Thanks also to its sister company Fonderia Getti Speciali, ICMA enjoys an in-depth metallurgical expertise, increasingly important in the mechanical world, due to the increased needs for efficiency and durability of materials (wear and/or corrosion) required by an advanced and modern market.

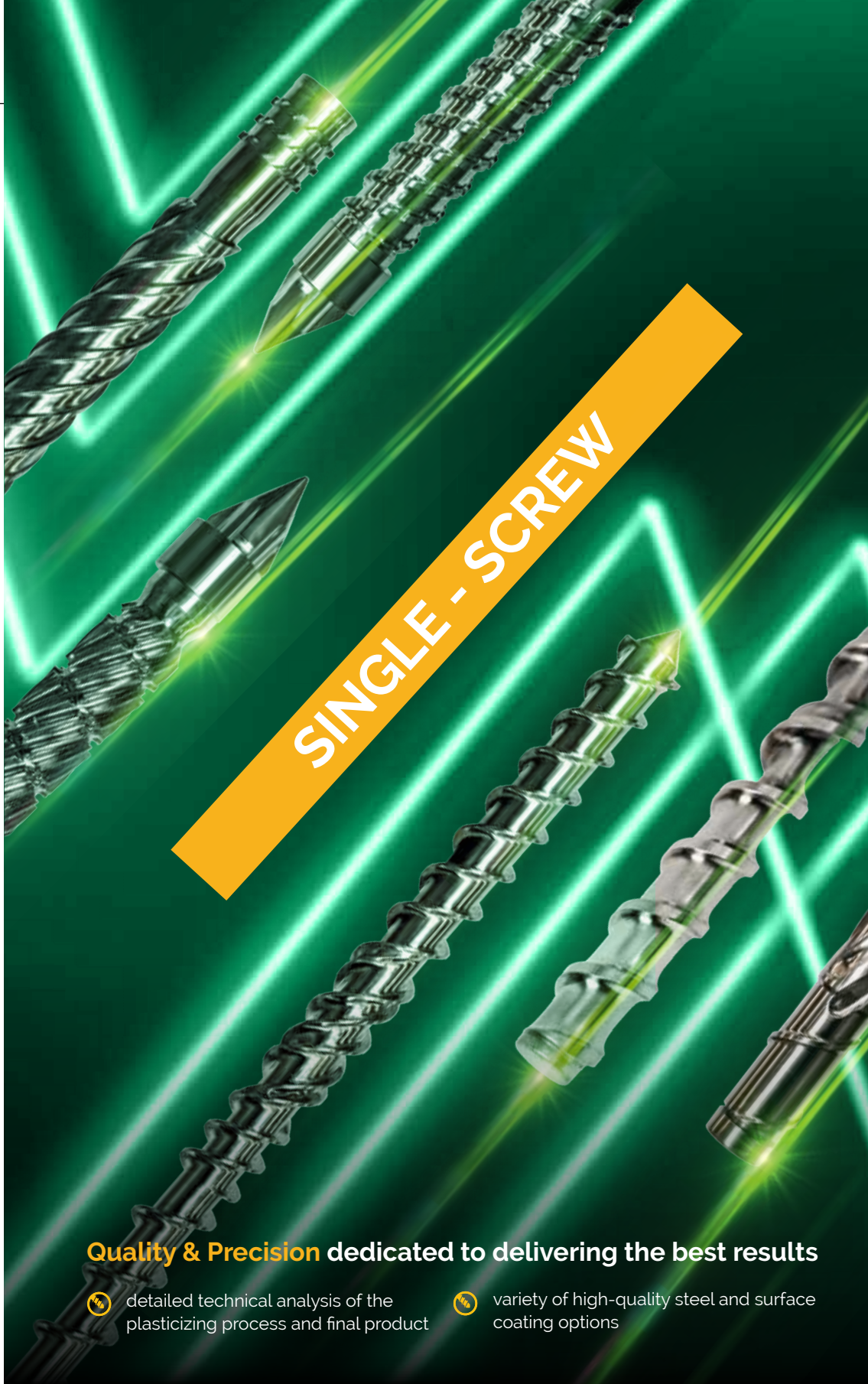
ICMA's most recent areas of investment are personnel, with the inclusion of new figures in the various areas also with a view to generational turnover, the machine tool fleet, substantially renewed and significantly expanded in the last 5 years and, recently, the strengthening of what has become, with its over 1.000 m2 and 4 lines installed, a unique space dedicated to the innovation of its machinery and extrusion lines, to the formulation development of our customers as well as to the traditional testing activity for potential customers of plants. This space, to capture its deepest nature, has been called Innovation Hub or "House of Innovation", and has absorbed a lot of energy, both physical and economic, but of which the company is extraordinarily proud and satisfied.

In recent years ICMA has created high-tech systems in various fields, from the very current one of the mechanical recycling of post-consumer plastics and eco-sustainable materials for mainly national and European companies attentive to the opportunities of the circular economy, to more traditional fields in automotive, construction and advanced materials sectors.

To confirm its innovative footprint, ICMA received the Solar Impulse label in 2020 for the development of an extrusion line capable of providing answers to some crucial issues related to the world of environmental sustainability, becoming a member of the prestigious Solar Impulse Foundation, an international network founded by the visionary Bertrand Piccard to promote clean-tech solutions globally with economic and social impact.

ICMA therefore has entered this new era very well prepared to tackle the many challenges and opportunities posed by a changing society with its long history, its solid and unique industrial platform, its competent staff who covers all the key areas of a dynamic manufacturer in the world of plastics plant engineering and very responsive to listen, understand and execute modern plant requests .

icmasg.it



SINGLE - SCREW

Quality & Precision dedicated to delivering the best results

-  detailed technical analysis of the plasticizing process and final product
-  variety of high-quality steel and surface coating options

-  EXTRUSION
-  CONICAL SET
-  INJECTION
-  CO-ROTATING
-  TWIN PARALLEL
-  SPECIAL APPLICATION



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FOLLOW US ON 

Materia CL, extreme machining operations with ground-breaking technology

Biesse has focused its attention on developing cutting edge solutions to meet market demand in the advance materials sector, which is seeing significant growth.



ing any material currently present on the market. Biesse is capable of completing the entire production process and offers technology for: precision cutting of sheets, thanks to the Selco Plast range of cutters; 3-axis or 5-axis precision milling of sheets, thanks to the Rover Plast range of machining centres; high-tech milling of medium and large components, thanks to the Materia range of machining centres; and of course, precision water jet cutting thanks to the Primus range of waterjet systems.

Materia CL, creative technology

The Materia range of machining centres, designed to process thermoformed plastics, composites and aluminium, offers a vast technological selection to



The cutting-edge innovation Biesse is known for derives directly from the high-tech solutions used in its products, as well as from the group's drive to invest in skilled human capital and the desire to expand and add to the company's range and experience.

Areas of application – The production of advanced technical items

Biesse offers solutions designed to respond to a vast range of machining needs for the production of advanced technical items, components and specific manufacturing products with multiple fields of application.

A vast range of materials and components are used in different sectors: automotive, packaging, bottling lines, agri-food, packing, and the automated handling of goods, to list just a few. When it comes to machining the vast range of materials demanded by the market Biesse is the ideal partner, capable of handling rubber, PVC or plastic composites,

silicone, polyethylene, and technopolymers whose composition, behaviour, elasticity, finishing and hardness suit the most widely requested needs.

Biesse technology

Always focused on the end user, Biesse solutions are technologically competitive, easy to use, versatile and complete with all the optionals for machin-

meet the machining requests for elements considered complex because of their shape, size or the type of material used.

High-quality and accurate electrospindles, numer-



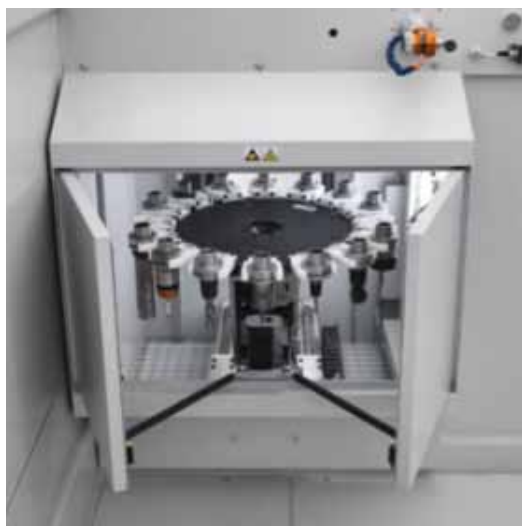
ous optional and standard systems (on the basis of the material being machined), two numerical control systems (Osai OPENprime or Siemens SINUMERIK 840D sl, particularly requested in the automotive sector), a robust structure and the perfect combination of speed and precision. A variety of models to match every production need. Materia CL is a range of versatile, compact, 5-axis processing centres designed to meet a wide variety



of high-speed machining needs in relation to the milling of advanced and compound materials and special or stratified resins for mould models, the machining of thermoformed elements, unusually shaped three-dimensional elements, and components for the aeronautical sector, boats and the car industry.

Top quality and reliability for every type of machining operation

The high-performance milling electrospindles are available in three different sizes (6.5 Kw, 11 Kw and 15 Kw), depending on the type of machining operation required. The head has a reduced size, offers



structural rigidity and vibration damping, and can be equipped with various electrospindles. In addition, the heads can be configured with continuous rotation, electrospindle encoders and direct

encoders and pneumatic brakes on the rotary axes, in accordance with the requirements of each individual application.

Reduced tool change time

The machine can also be equipped with a rotating magazine (holding up to 16 tools) on the right-hand side to facilitate tooling operations. Materia CL can be equipped with a contact thickness



tracer or a laser probe for tool pre-setting, and a radio frequency thickness tracer for acquiring the piece coordinates and dimensions. Depending on the type of machining operation to be carried out, Materia CL can be fitted with a spray mist lubrication/cooling system outside the spindle, or simply with compressed air.

Machine personalisation to suit a wide variety of production needs

Materia CL can be configured with four different worktables: open gridded, stratified phenolic resin grid, gridded aluminium, or gridded aluminium with "T" slots obtained from steel plates.



Safety and cleaning of the product and work area

The Materia CL can be equipped with an upper closure system that completely encloses the ma-

chine, The ceiling mounted bellows guarantee a safe work environment for the operator, especially when machining materials that produce large amounts of dust. The manual opening allows the piece to be loaded by means of a bridge crane.



For more information about machines for the processing of advanced materials visit the dedicated section of our website at the following link <https://www.biesse.com/ww/advanced-materials/>.

Biesse

We're an international company that produces integrated lines and machines for processing wood, glass, stone, plastic, composite materials and the materials of the future.

Founded in Italy in 1969 and listed on the Euronext STAR segment of the Italian Stock Exchange, we aid the business evolution of our clients in the furniture, housing & construction, automotive and aerospace sectors.

Today, about 80 per cent of our consolidated turnover is achieved abroad thanks to an ever-growing worldwide network with 4 production campuses and over 30 showrooms, through which we're able to reach more than 160 countries.

With the expertise of our 4,200 employees, we encourage the imagination of sector-leading companies and prestigious names in Italian and international design, bringing out the potential of any material.

[biesse.com](https://www.biesse.com)

FV32/112HP CORRUGATOR

ITIB MACHINERY is delighted to talk about its new high-performance corrugator, the fastest of its range, particularly suited for all the markets who need no compromise, high speed production of small diameter pipes.

The name FV32/112HP summarizes all its main features: FV identifies the vacuum forming system, 32 the pipe maximum outer diameter in mm that can be produced, 112 the number of pairs of moulds that make up the chain and, finally, HP is the abbreviation of high performance.

In fact, the main target was to design a corrugator in such a way that it was able to fully exploit the potential of modern extruders and coiling systems, moving any bottleneck in the production line far from the corrugator.

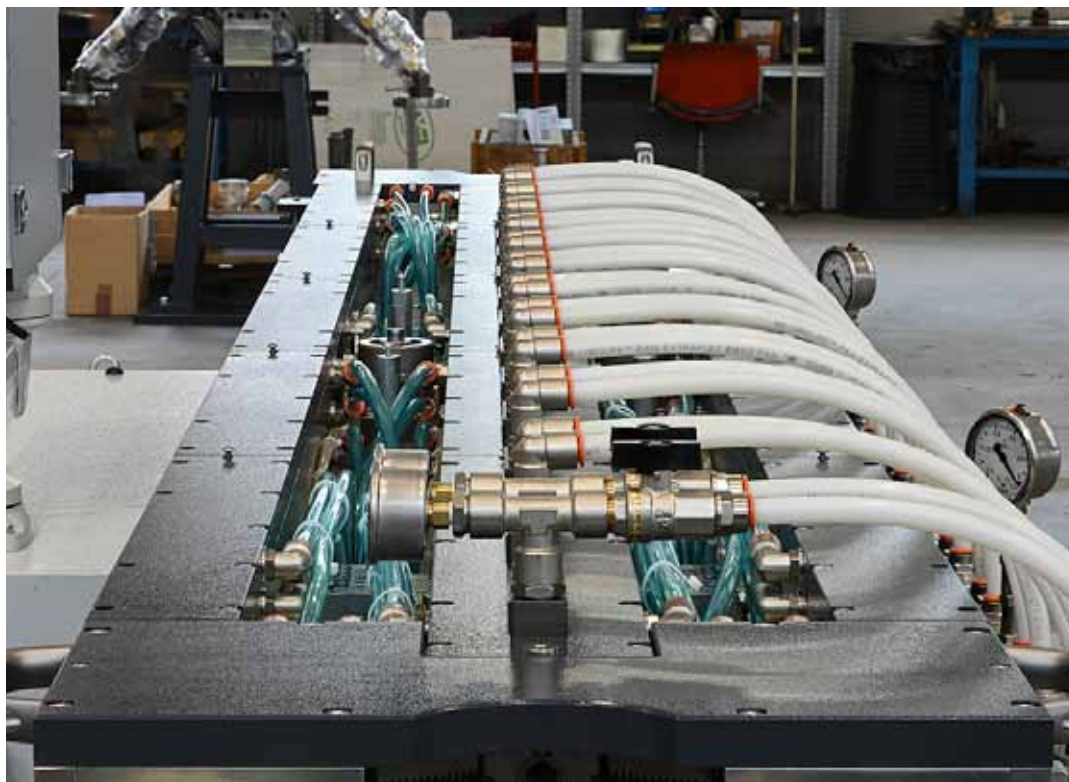
Of course, extreme performance cannot be at the expense of reliability, accessibility, ease of use and quality of the final product.

The attention paid to all these aspects by the technical department of ITIB Machinery emerges clearly in the design and technical solutions adopted in the new, super-fast corrugator.

Technical specs and innovations compared to the previous version

It is clear that the main feature of FV32/112HP (link <https://itib-machinery.com/products/corrugators/fv32-112hp/>) is the high production speed: 80 meters per minute is its maximum mechanical speed; high enough to meet the most demanding requirements, in terms of performance, for the production of PVC, PP and PE conduits.

Running a corrugated pipe at extremely high speed is the result of the balance of different conditions:



number and dimension of the moulds, cooling efficiency, temperature and flow of the coolant and possibility to manage the thermal expansion of the moulds chain without any risky action of the operator during the production. For this reason, a totally new design characterizes the corrugator: each half

moulds chain is moved by separate gears, driven by a single brushless motor with gearbox and torque limiter to avoid damaging of the moulds in case of jam. Additional central free running gears, along with the independently controlled cooling and right/left channels temperature setting prevent





chain thermal expansion issues. Moreover, the optimized length of the forming channel, which is more than 10% longer with the same total chain length, and the cooling on all four sides of the moulds are essential keys to make the production faster and more efficient, always ensuring a high-quality pipe, guaranteeing a constant and perfect shape during the forming process. An enlarged cross section of the water-cooling channels also participates to the high cooling capacity

cover of the closing/opening and central channels can be easily and independently removed after fast emptying of the cooling circuit, operable directly from the touch screen simply pressing a button. The pushing rack is machined on the rear side of each half mould in such a way that it is possible to remove and replace them easily in any part of the channels; a central pin in the front face guarantees a precise alignment of the two halves and thus a high-quality pipe. The main table is running



forming, compared to solutions with longer blocks. The channels where the moulds are running are faithful to ITIB Machinery tradition as well; in fact, each section is sturdy and made from single solid steel blocks where the "U" or "C" shapes of the channels and high precision long holes are milled and machined. The respect and control of very narrow tolerances thanks to 5 axis CNC machines, where also the moulds are made, are a must to guarantee a safe running at 80m/min.

of FV32/112HP.

Openable inlet covers grant an easy access to the closing channel in case of material jam, thus reducing downtime of the extrusion line. The optimized path of the moulds is confirmed by a smooth hit-free sound of the running moulds at any speed and its design in the closing section allows to obtain a very reduced length of the extrusion die, to decrease the head pressure and allow the extruder to fully exploit the high cooling capacity of the machine. Any top

on high precision linear roller guides and lays on a classic solid tubular frame, which contributes to a vibration free running and allows optimal access to all parts of the cinematic chain, of the water cooling, air, and lubrication circuits. Despite of the new design and innovations, the new corrugator maintains the same number of moulds of the classic F32/112 and the same mould length as well; the latter solution allows an easier release of the pipe at the outlet channel in case of vacuum



MACHINE OF THE MONTH - CORRUGATOR

Of course, the HP version is available in the most common pipe forming systems: blow and vacuum forming. Both of them are used for the production of corrugated electrical conduits employed in buildings and constructions, the main pipe application for which the FV32/112HP has been designed: the classic blow forming system for PVC conduits, and

If you want to see our FV32/112HP in action, please watch our video presentation of the product



vacuum forming for PE/PP conduits and pre-wired solutions with a vacuum pump as part of the supply. An additional cooling tank and puller can be also added to increase the production speed even more up to 25% and guarantee a memory free coiling of the pipe.

Onboard control touchscreen

The FV32/112HP cannot do without being industry 4.0 ready: it can be interconnected with other systems and key areas involved in the manufacturing process, letting data collection and decision making easier and more efficient.

The new HMI display allows operators to directly

interact with the FV32/112HP: just one touch to start and stop the machine, control any ancillary devices or equipment, change the main operating parameters, and interact with the PLC; the system stores all data and alarms and of course can be synchronized with the extruder and downstreams, in order to control all components of the production chain directly from the same display panel and prevent material jam, pushing the corrugator back by means of an air cylinder, far the extruder, stopping it as well and thus the plastic material flow.

A great attention was given to the solution of major problems connected to extrusion lines for corrugated pipes but to small important details as well; this approach, along with the well-known Italian design catch the attention and make the FV32/112HP corrugator standing out in the extrusion line.

Of course, not only performance, but also safety and energy saving are key points of ITIB Machinery corrugators (link <https://itib-machinery.com/products/corrugators/>): the most updated components and ancillary equipments are selected, while consumptions, temperatures and transmission torque are constantly monitored by the onboard control systems.

Future projects

Another fundamental piece has been added to the wide range of ITIB Machinery's corrugators and great interest for its performance and technical solutions is already showed by customers and market. Meanwhile, the company's R&D activity cannot stop, and new projects are underway to provide ITIB MACHINERY's customers with equipment that is always up to date with the high expectations of today's market in any application where corrugated pipes are used.



IDENTITY CARD



NAME

FV32/112HP CORRUGATOR

PRODUCER

Itib Machinery

Via Trento 34, 25050, Paderno Franciacorta (BS) ITALY

T. +39 030 6858500

www.itib-machinery.com

TECHNICAL CHARACTERISTICS

- Maximum mechanical running speed of 80m/min.
- Independent right/left chains cooling and temperature setting
- Free from moulds chain thermal expansion issues
- Vacuum forming as a standard
- Reduced maintenance
- Speed controlled vacuum pump for energy saving
- Industry 4.0 specifications ready

Tecnova E180-45D double degassing machine

For cast extrusion, high productivity and low consumption but also flexibility and compatibility with systems built by third parties



ground waste from film reels, which during storage have undergone significant temperature changes which have compromised their characteristics and are therefore no longer usable. The destination of the film, in this specific case, is the automotive sector which uses it for car windshields, it is therefore essential that the output qualitatively corresponds to the parameters of safety, quality and resistance. The system was customized to meet the processing needs expressed by the customer who, mainly, required productivity and reduction of energy consumption.

The Tecnova Technical, Research and Development Department team worked to create a machine whose construction size was also expressed in the attention paid to: the choice of materials, components and the supply chain involved, all partners of the short supply chain, which allow the Novara company to create 100% Made in Italy systems.

The production capacity for this configuration is 1,000 kg/hour of film, the motors are all high efficiency Inverter, the extruder is equipped with insulated stainless steel casings which avoid heat loss and contribute to the creation of a finished product that meets the required standards and the reduction of energy consumption. The control on the machine takes place via an LC 4.0 touch screen monitor, whose management software allows you to remotely monitor the operation and intervene promptly to avoid system blocks helping the operator especially in the first weeks of work. Within the program the operator can choose between different languages and different management pages for the different parts of the line.



TECNOVA, a cutting-edge company in the international panorama of plastic recycling plants, continues to stand out not only in Italy but also in the global context to which it looks with great attention, with a view to customer satisfaction and product customization.

As was the case for the E180-45D double degassing machine, created for the recycling of plastic materials but, in the specific case of this order in Belgium, it was designed for the cast, therefore flat die, extrusion of film PVB, a material with severe technical characteristics: it is a material that must be very transparent and homogeneous. We start from



It can be perfectly connected to systems created by third parties, in which case TECNOVA carries out the adaptations required for the connections. The fulfillment of the order includes delivery, assembly, testing with training sessions, all of which is carried out in a maximum of 10-15 days.

The training sessions are flexible and personalized, adapting to the specific needs of each customer, the expert technicians work directly in the company with the operators, offering practical, in-depth assistance and training on the different system functions and applications.

This targeted approach guarantees that customers become familiar with the machines and develop the skills necessary to operate independently and safely, even in the after-sales phase.

The assistance of Tecnova technicians is always prompt and available to help the customer in every phase of the work.

The system is CE certified, like the entire TECNOVA production range.

IDENTITY CARD



NAME

E180-45D double degassing machine

PRODUCER

Tecnova Srl

Via Verbano 56

28047 Oleggio (NO) Italy

tecnovarecycling.it

phone. +39 0321 91700

Caldara Plast: a new perspective for a greener future

Caldara Plast wants to let stakeholders know that plastic is a versatile material, recyclable and reusable countless times in the production process, thus reducing the environmental impact.

Under the guidance of brothers, Massimiliano, Attilio and Alessandro, Caldara Plast is increasingly distinguishing itself on the market as an industrial recycling company capable of providing a 360-degree service: from recovery of waste material, scraps, offcuts etc. to the supply of regenerated compounds, including the line of “Caldara 2nd Life” certified products. On the recovery side, the company offers suppliers the possibility to give a new life to production waste. On the compound side, the company offers customers regenerated compounds, such as industrial-grade granules and modified raw materials, all produced according to their needs. Caldara Plast is a valuable partner for customers that want to develop new formulations, thanks to the specific skills of the company’s specialised technicians able to meet all their needs.

Caldara Plast products

The thermoplastic granules are intended for the automotive, furniture, household appliance and electrical industries both in Italy (70%) and internationally (30%). During the last few months, supplies to the international market grew despite the crisis caused by the Covid-19 pandemic. The main compounds produced by the company are sinLAC ABS, sinBLEND PC/ABS, sinCARB PC, sinSTYR PS,





sinMID PA6 E PA66, sinTRON PPS, sinPOM POM, sinGLASS PMMA, sinKRYL SAN, sinTER PBT, sinPET PET.

The great market demand for regenerated products and the desire to make them more and more recognisable, has led Caldara Plast to certify the quality of its materials. Thus, in 2020 the company obtained the "PSV - Plastica Seconda Vita" (Plastic Second Life) mark issued by the IPPR (Institute for the Promotion of Recycled Plastics) for a series of products. These certifications guarantee the customer complete traceability of all components of the finished product and ensure that they contain a minimum percentage of recycled plastic, as well as meet strict environmental and social parameters in the production chain.

Large production capacity, speed and availability are the most suitable terms to describe this Lombardy-based production company, whose investments in the coming months will concern the production and business organisation, as well as communication and technology.

Caldara Plast production process

The company's core business has always been the recovery of industrial processing waste, mainly from processes such as molding, thermoforming, extrusion and blow-molding of different types of plastics. These materials are then ground through mills at the Erba site, which is duly authorized for the recovery, transport and storage of the inputs used, which by law are considered waste. Caldara Plast directly organizes the entire cycle, from the collection of waste with the help of its own fleet of vehicles, providing companies with special tanks, roll-off skips and presses to collect the material. The material destined for recovery, once ground, is stored in the warehouses and can consequently be sold as such or sent to the Alzate Brianza site, which specializes in extrusion for the production of customized thermoplastic granules.

In the Compound Division, the ground material is thus processed and, depending on the customer's specific requirements, it can be re-granulated without additions, or it can be additivated (with flame retardants, also halogen-free, glass fibre, carbon fibre, glass spheres, anti-static, laserable, UV,

antibacterial, conductive additives, aramid fibre) and/or pigmented and then extruded with special single and twin-screw dies. All together, Caldara Plast boasts no less than 15 extrusion lines with relative mixers to homogenize production batches. Processing takes place on a continuous cycle, consequently managing to extrude, at full capacity, over 100 tonnes per day of material for a total of approximately 22,000 tonnes per year.

The division's laboratory houses specialized technicians who constantly check the quality of the product, both incoming and outgoing, directly on site, thus personally guaranteeing high quality standards and keeping them constant over time.



Well aware of the fact that respect for the environment and the incentive to use recycled plastic are driving the markets well beyond forecasts, Caldara Plast is structuring itself in an increasingly efficient manner to respond to the consequent constantly evolving market dynamics, in line with the company mission, which is to reduce the share of non-recoverable plastic waste to a minimum and to promote the culture of using regenerated material, considerably reducing the use of virgin raw materials, where technically feasible.

Caldara Plast is increasingly convinced that the use of regenerated plastic material must increasingly be the first choice of companies that care about the environment.

The trend of recent years is to "measure" the impact that each company has on the environment

and Caldara, with the support of external evaluators, has also begun to analyze its consumption of water, energy, natural gas, fuel etc... and understand your impact on the entire production cycle: from the procurement of raw materials, to the manufacturing cycle up to the delivery of the material to customers. The boundary of this analysis was defined and the data from recent years was compared. The aim is to find points for improvement and efficiency and check in subsequent years whether the established objectives have been achieved. An incentive to always do better. The document constructed by referring to the internationally recognized technical standards in the LCA (Life Cycle Assessment) field is called LCP - Life Cycle Perspective and has allowed the company to see first-hand how much the granules produced with post-industrial or post-recycled material consumption have a decidedly lower impact than virgin raw materials. The analysis was also confirmed for 2024.

It is the choices of companies that underline their green vocation. Caldara Plast customers know that, for the same price, they are choosing a regenerated compound that will help them to be more sustainable too.

Caldara guarantees its customers compliance with all legal authorizations for waste collection and storage, as well as with all relevant European and international regulations (RoHS, REACH, etc.). The company is also ISO 9001:2015 and ISO 14001:2015 certified.

Caldara Plast wants to let stakeholders know that plastic is a versatile material, recyclable and reusable countless times in the production process, thus reducing the environmental impact. The world production of plastics is increasingly and the recycling of plastics allows a reduction of up to 90% of CO2 emissions compared to its production. Caldara Plast's mission is to give a second life to waste, which today can no longer be considered a second choice but the first choice of companies that care about the environment. For an increasingly greener future. Because the future belongs to companies that care about the environment

<http://www.caldara.it/>
www.caldara.it

Greenchemicals: “The partner for your growth”

Greenchemicals, an Italian company specialized in flame retardant formulations and stabilizing packages for plastics, was founded in 2012 thanks to Micaela Lorenzi’s experience in the world of additivation.



ucts. The use of powders, in fact, is less and less recommended both for production performance reasons and for issues related to the health of workers. “Together with some partners specialized in compaction, cold extrusion and blend, we have been able to compact our halogen-free flame retardant products” – says Micaela Lorenzi, CEO of Greenchemicals – “Our customers who have tried them have achieved a significant improvement both in product performance and in production use”. “We believe,” Lorenzi continues, “that physical fitness is really a very important aspect to improve the production process and that is why we have embarked on this path that is already bringing us the first enthusiastic results.”

Another novelty studied by the Greenchemicals team is related to the world of recycling. When recycling plastics, additives are often found in the polymer to be recycled that are annoying both for the recycling process itself and for the machines.

The search for products with low environmental impact and useful for more sustainable recycling have always been the target of the company, which focuses its attention above all in the field of halogen-free self-extinguishing packages, in particular for polyamides and polyolefins.

A further step forward has recently been made in the study of the best physical forms for these prod-



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“Starting from this problem,” continues Dr. Lorenzi, “we have developed a series of additives capable of eliminating the presence of these substances, especially flame retardants, during the recycling process, with the effective advantage of preserving the mechanical characteristics of the polymer and at the same time eliminating acidic agents that can damage the extruder”

The Greenchemicals team is totally customer oriented. It supports its customers both in terms of product procurement and from a technical point of view in all phases of the production process, always informing about the evolution of the market and proposing innovative packages to allow its customers constant growth and increasingly respecting the environment.

www.greenchemicals.eu

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EuCertPlast

Amut: unique recycling trio in the world

Duet, Choir and Symphony: Circular Plastic Australia named three Projects for a recycling melody!



AMUT has scored a winning trio in Australia, after the third consecutive commissioning of a recycling plant, to the full satisfaction of the customer, in two and a half years. A repeated success in three projects that is unique in the World due to its peculiarities. AMUT has been involved, with its advanced recycling technologies, in three new World-class plants, which will recycle approximately 60,000 tonnes of post-consumer plastic packaging into high-quality resins (including food grade) annually. Circular Plastics Australia (PET), a joint venture Pact Group, Cleanaway Waste Management, Asahi Beverages, and Coca-Cola Europacific Partners

(CCEP) has chosen AMUT as the preferred partner for the design and construction of its “Duet and Symphony” recycling projects in Albury and Melbourne. AMUT was also chosen by the Circular Plastics Australia (PE) joint venture between Pact and Cleanaway for the Choir project, also in Melbourne.

These integrated, custom engineered sorting and washing plants ensure that the bottles are part of a closed cycle, where they are used, collected and given another life. While Duet and Symphony are intended for PET bottles sorting and washing, Choir is for HDPE and PP.

The Duet recycling line, in operation since 2022, was initially conceived for a total 3,400 Kg/h output. Once running and after one year of operation, it is now totalling 4,000 Kg. / h output. A successful result due to AMUT’s design and highly performing solutions, surpassing client’s expectations.

We are proud of the acceptance of AMUT’s highly specialised technology provided to the Symphony project on last November. The exciting opening ceremony of Symphony took place in the presence of Federal Environment Minister Tanya Plibersek and Victorian Minister for Environment Steve Dipoulous.





Furthermore, in December we got the green light from the client for the Choir project as well.

The world-class Symphony plastic recycling facility is the biggest of its kind in Victoria and furnished with state-of-the-art equipment capable of producing up to 20,000 tonnes per year of recycled PET resin. When fully operational, Symphony is capable of turning the equivalent of up to one billion 600ml PET plastic beverage bottles a year, into high-value food-grade PET pellets which are then used to make new rPET beverage bottles and food packaging.

Furthermore, the Symphony plant also has the ability to process low viscosity PET tubs and trays.



AMUT washing lines are equipped with the best technical solutions to guarantee high purity of the final PO/PET flakes and in particular the perfect removal of organic and inorganic contaminants and separation of PSA labels and glue. These highly automated washing systems ensure extremely low operational costs with reduced power and water consumptions, and chemicals, too. An important step on the path towards circularity tackling climate change.

About AMUT

AMUT, established in 1958, is a global plastic processing, recycling and waste sorting & recovery systems designer and manufacturer. Over the years the company has evolved considerably providing customers with an increasingly extensive range of high quality Extrusion and Recycling, turn-key plants and related Services. The world Headquarters and production facility is AMUT S.p.A. which is located in Novara (Italy). Candelù (Italy) completes the manufacturing sites. Operating globally, the offices and customer service centers are strategically located in U.S.A., Canada and South East Asia. This international presence is further enhanced through an efficient worldwide agent network.

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EN 1090-1 (EN 1090-2, EN 1090-3) CERTIFIED**

Vertical GUM VCV 300/1000

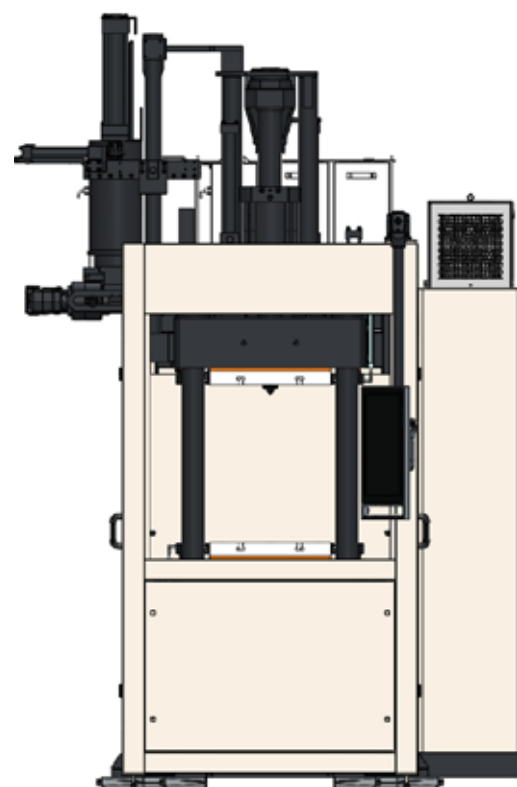
IMG is a leading Italian company in the field of injection and compression moulding machines for elastomers, silicone and thermosets.

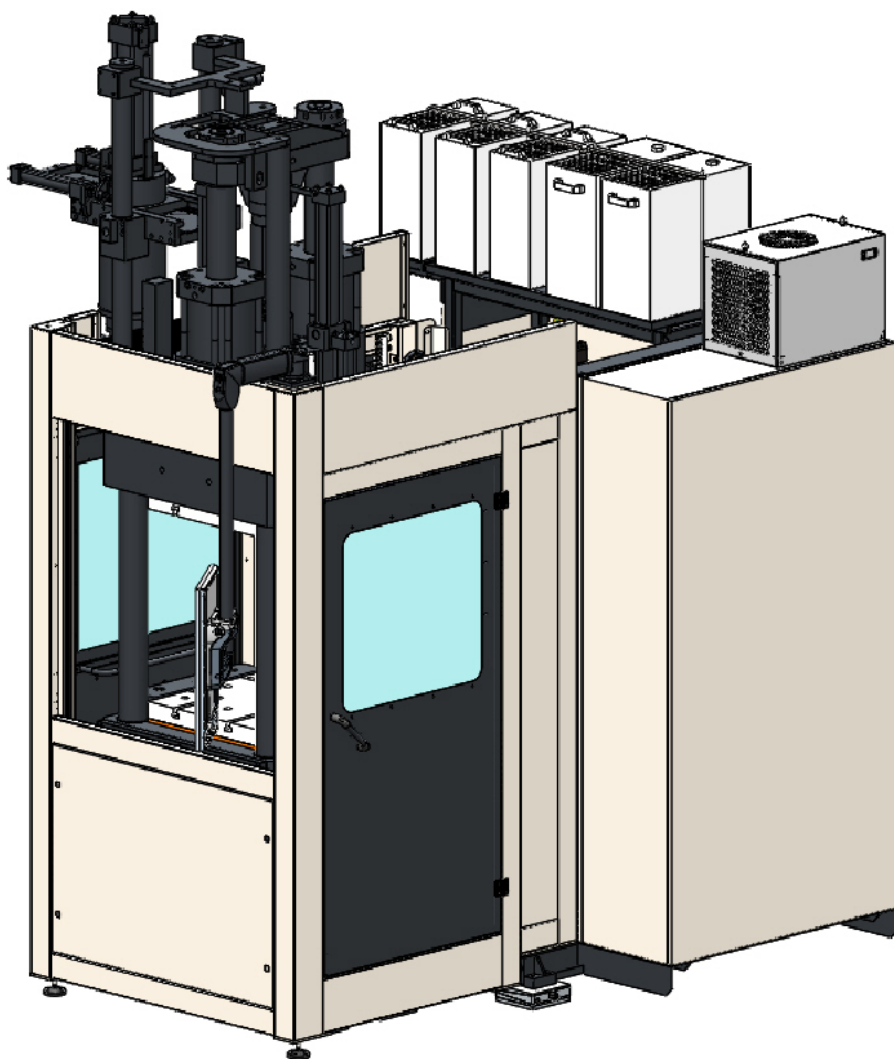


Since the beginning, IMG has established itself as the main supplier of presses in Italy in the Sebino rubber district (also known as 'Rubber Valley'), an area located between the provinces of Brescia and Bergamo and which, together with Varese and Reggio Emilia, produces around 80% of total European rubber-plastic production. Its proximity to this specific area, where customers demand constant innovation combined with very high technological standards, has always driven IMG to continuous technological and other improvements, to the point where it is now not just a supplier of machinery, but a partner capable of offering all-round solutions in the moulding field to its Italian and international customers.

For about two years now, the company has been seeking partners and customers even beyond its national borders, an area in which it has become synonymous with products of the highest quality and reliability.

If the Italian market for IMG today represents the 80% and the foreign market the 20%, the goal is to grow the business beyond its borders to 30% within three years. "The tendency to open up to foreign markets, in addition to the domestic one, which is still very important, is gradually taking place," explains CEO Barbara Ulcelli. "The quality of our presses is now recognised internationally".





VERTICAL GUM VCV 300/1000

The latest addition to IMG's machine range is a brand-new vertical injection moulding machine: the Vertical GUM model "VCV".

This vertical machine features a clamping unit consisting of an "inverted piston" with a clamping force of 300 tonnes and an injection unit consisting of a screw and piston, also known as Li.Fo. (last-in, first-out), with a 1000 cc injection capacity.

The special "bottom-up" clamping guarantees a saving on the overall machine clamping time calculated at around 30%, compared to a standard piston positioned at the top of the machine and with "top-down" movement, guaranteeing a significant reduction in cycle time and therefore greater productivity in less time for the customer.

On a mechanical level, the machine unit is relieved of the mould height adjustment elements by eliminating the fixed platen shifters and can be equipped with servo-assisted pressure/flow feedback motors for the main movements and the option of a second servo-pump unit for overlapping auxiliary movements.

Like all IMG models, the VCV can mould solid silicone, thanks to the hopper accessory, and liquid silicone (L.S.R.). In this second case, the company supplies the appropriate pump for dosing the two components (with containers A and B) as an auxiliary accessory.

Another peculiarity of the VCV model is the possibility of having the ejectors on the fixed plate and on the moving plate, to facilitate manual extraction of the finished part and the possibility of adding a third and up to a fourth plate to achieve maximum

productivity.

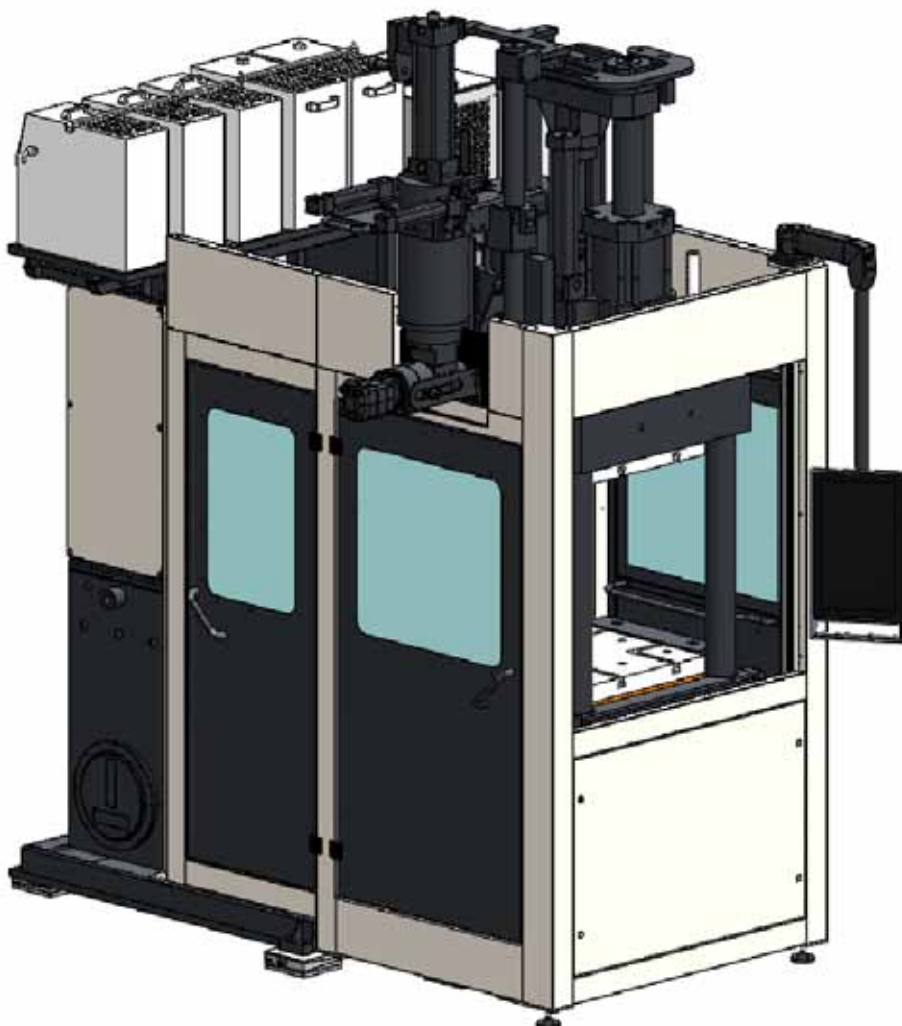
Another very appreciated accessory is the vacuum pump for suctioning air from the mould and consequently eliminating any surface imperfections on the product.

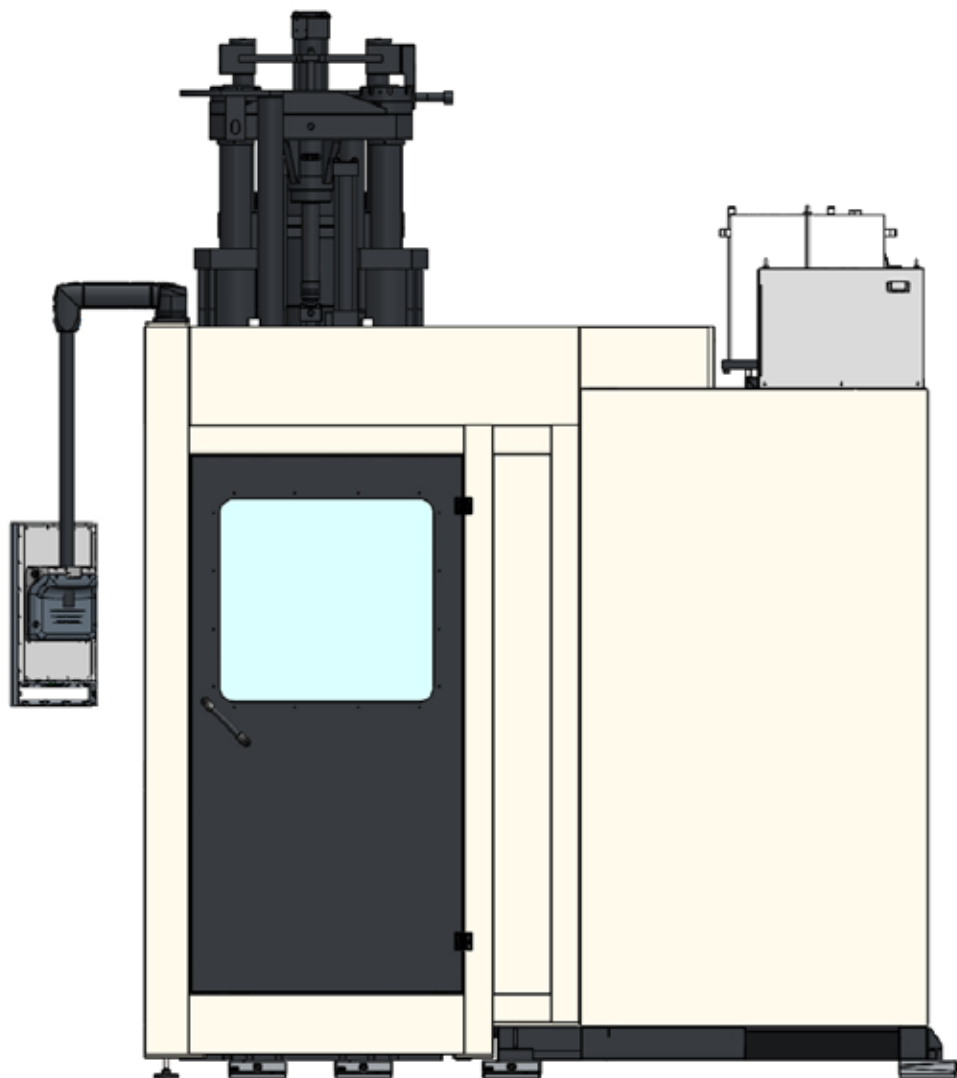
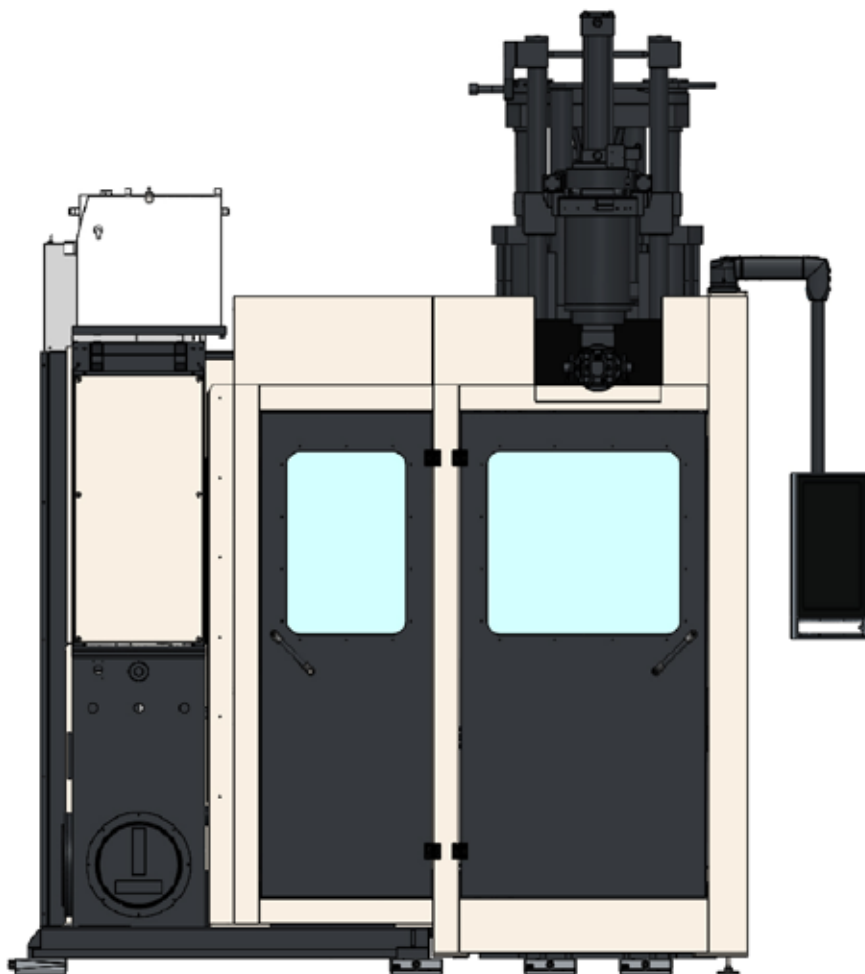
Concerning the HMI (Human Machine Interface) aspect, the machine is equipped with a 21.5-inch touchscreen PLC, which is very convenient for the operator who has to carry out the set-up, large and clearly visible.

The panel's internal software is user-friendly and can be supplied in all languages.

Moreover, to meet the ever-increasing demand for automation from its customers, IMG can also supply this model with the option of having a removable lower platen, which is very useful to facilitate mould changes and for safer manual removal of finished parts and, if requested by the customer, also with the presence of an anthropomorphic robot to replace the operator's work and considerably reduce cycle times.

As with all IMG moulding machines, design has its importance: not only can the VCV be supplied in the colour of your choice, but it also boasts an extreme compactness that allows you to make the most of the space in the factory, thus reducing the problems associated with the ever-increasing lack of space for our Italian and international customers. IMG has always distinguished itself for a very high degree of customisation of its presses in all aspects, so that it is able to offer its customers machines that





can be defined as tailor-made.

After sales

Another element that has always been seen as key to customer loyalty, especially outside national borders, is the extensive after-sales service.

All IMG presses, VCV model obviously included, leave the company with an electronic component already installed, which ensures constant monitoring and allows immediate intervention by software technicians if necessary.

By means of the in-house control room, the technicians support and guide the customer until the problem is fixed, with no need to wait for a technician to be sent on site, thus solving everything remotely with great time savings.

In the case of the need for spare parts, the company has two automated warehouses that ensure the rapid dispatch of components to all customers throughout Europe.

The latest innovation at IMG, as far as after-sales services are concerned, is the creation of a training course with the aim of guaranteeing basic training for its customers' press operators.

In fact, at the end of March, the third edition of the IMG SCHOOL project will be held: a two-day course, between theory and practice, dedicated to the training of IMG press operators through the support of an external training organisation that deals specifically with training in the world of rubber.

The latest example demonstrating the attention of IMG to its customers does not end with the simple sale of the moulding machine.

IMG presses portfolio

The Vertical Gum VCV is, however, just one of several moulding machines that IMG offers its customers.

In fact, the portfolio consists of more than 14 models including horizontal and vertical machines for injection and compression moulding of elastomers, silicones and thermosets, as well as special presses to increase productivity or reduce cycle times, and tailor-made robotic cells made specifically for the needs of each customer.

"There are many advantages of an automated cell: consistent quality, high level of programmability, flexibility in executing different and repetitive processes, continuous profitability resulting in increased competitiveness, and high safety. All robotic cells supplied by IMG are CE-certified", explains Fabrizio Bonfadini, IMG's Operations Director. "Thanks to continuous investment in research and development, the company has come to offer a very high level of automation, which can be customised and tailored to specific production needs". To these solutions have recently been added the new machine model REM300, the first full-electric injection moulding machine in the rubber industry, which offers numerous advantages in terms of precision, repeatability and savings in energy and raw material.

With this wide range of products and services, IMG boasts all the winning features that have made it a leader in the Rubber Valley.

IDENTITY CARD



NAME

VERTICAL GUM VCV 300/1000

PRODUCER

IMG

Via Industriale 106 – 108
25020 Capriano del Colle (BS) Italia
+39 030 314645
infowww.imgmacchine.it

TECHNICAL CHARACTERISTICS

- Injection punch diameter: 65mm
- Theoretical injection capacity: 1000cm³
- Closing force: 3000 kN
- Max daylight between platens: 1100mm
- Mould height min - max: 50 – 550mm
- External platens dimension: 905 x 905mm
- Machine weight: 12ton

Harnessing just unveiled innovative technologies and solutions

CHINAPLAS 2024, the Asia's No. 1 Plastics and Rubber Fair, will be held at the National Exhibition and Convention Center (NECC) in Hongqiao, Shanghai, PR China, on April 23-26, 2024. The event will showcase the latest market trends, breakthrough technologies, and innovative solutions in the plastics and rubber industries, enabling buyers from all over the world to actively participate in the accelerated industrial transformation with innovative technologies and solutions. In addition, it will be complemented by a series of concurrent events that further enhance the new advantages and momentum for high-quality industrial development.



China's manufacturing industry is currently undergoing a remarkable transformation, driven by a strategic shift that has positioned the country for a competitive advantage in the global market. This transformation is not only reshaping the industry but also presenting new opportunities and challenges for plastics and rubber enterprises. In today's landscape, it has become increasingly imperative for these enterprises to strive for higher cost-effectiveness by leveraging high-performance solutions and materials.

World Trends and Plastics and Rubber Technology Summit: Striving for Business, Advancement and Sustainability

In response to market demand and the drive to lead the sustainable development and upgrading of the plastics and rubber industries, an international industry conference, the World Trends and Plastics and Rubber Technology Summit, will be hosted for the first time during the exhibition. The event aims to gather representatives from associations and industry experts from around the world, focusing on sharing advanced experiences and technological solutions in industrial production and application fields. This initiative helps enterprises in staying informed about global industry trends and proac-

tively planning for future development.

Throughout the 3-day summit, professional association representatives from Asia, Europe and America will provide insights into industry trends, opportunities, and challenges across different markets. Additionally, renowned material and equipment suppliers such as KUKA, ARBURG, EREMA, SABIC, BASF, DOW, ENGEL, WITTMANN, SINOPEC, and BOROUGE will present their latest innovative tech-

nology solutions during sessions focused on "Digitalization for Industrial Transformation and Sustainability", "Innovative Technology for Electric Vehicles" and "Innovative Technology for Green Energy." Attendees will have plenty of opportunities to listen to the technology influencers and leading solution suppliers to analyze industry hotspots, gaining access to a wealth of cutting-edge technological information. Participants will also engage in face-to-face communication with counterparts from the global industry, fostering valuable business opportunities.

Product Innovation Gallery: Immersing in Product Innovations

Are you encountering difficulties in new product development or material sourcing? Do you want to quickly understand the innovative manufacturing technology behind the product? The Product Innovation Gallery is the spring of inspiration.

Imagine giant exhibit walls with the theme of "From Products to Technology. From Technology to Products", strategically placed in high-traffic locations across halls 2.1, 4.1, 5.1, 8.1, 1.2, 6.2 & 7.2, inviting visitors to embark on a journey of wonder. More than 70 dynamic enterprises showcase over 100 pieces of their distinctive products and semi-finished products, unveiling the groundbreaking



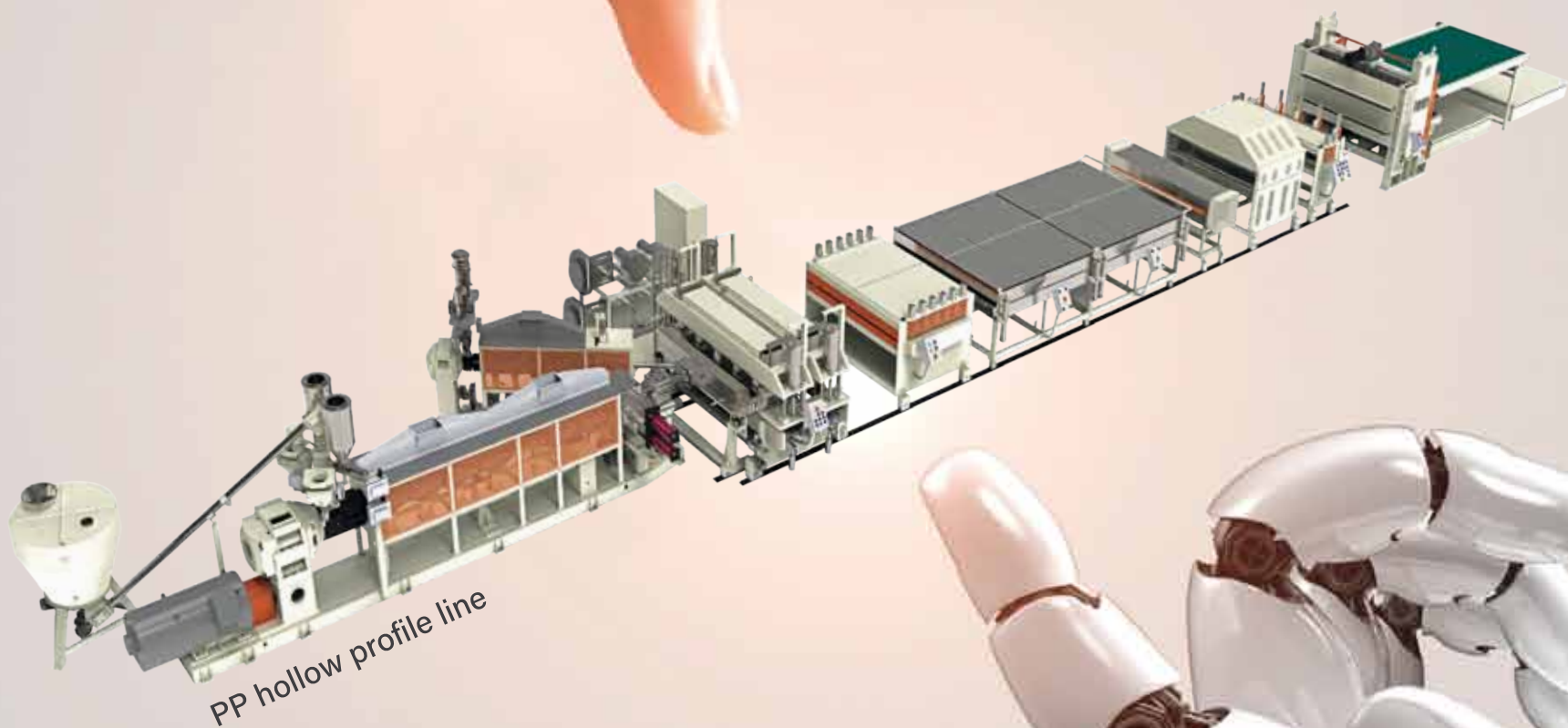
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plastics technology that powers them. Buyers will be inspired to optimize and iterate their own products and locate suitable suppliers by uncovering the secrets and suppliers that drive these remarkable innovations.

Tech Talk: Showcasing Diversified and Advanced Technologies

With a successful track record of six sessions, Tech Talk, the chosen platform for technology releases, has unveiled more than 150 innovative technologies, establishing itself as the foremost technology event of CHINAPLAS to be held on April 23-24 at booth 2.2G106. The organizer will select the latest, hottest, and most breakthrough over 30 advanced technologies from a large number of innovative technologies, and will release them in the form of open forums, making it an excellent platform for professional buyers to quickly understand the industry trends.

Tech Talk comprises five main themes that cover a diverse range of industry advancements, including "Eco-friendly Solutions", "Advanced Packaging Solutions", "Automotive Plastic Solutions", "3D Printing" and "2024 New Materials". Top companies from the plastics and rubber industries will participate in the event, seizing the opportunity to engage and interact with the audience. Simon-ion will demonstrate innovative application of intelligent

static control solutions in the packaging and film. Eastman Chemical will introduce their high-performance copolyester plastics. Kraiburg will focus on TPE innovations and solutions in the automotive industry. Stratasy will highlights the latest innovations in plastic 3D printing, including materials and equipment. SI Group Fine Chemicals will bring up innovative additive solutions for high-performance antioxidant and recycling applications.

various industries. With a focus on high performance, the event will encompass over 60 hot topics, including photoelectric cables, circular economy, low-carbon energy, medical sterilization packaging, integrated biomedical engineering, ready-meal packaging, green packaging, automobile safety, environmental protection, etc.

Featuring a total of 10 thematic seminars, this event offers invaluable insights into experiences and technology prospects of various application industries. Here highlight a few of these enlightening seminars. CP Business Services (Yantai) Co., Ltd. will organize "New Energy Vehicle Industry Development Forum: Prioritizing Safety, Battery Life and Material Selection" where they will share their insights on current landscape and future trends in new energy vehicle industry. The forum on "New Trends and Applications of Catering Packaging Consumption", to be held by China Catering Brand Alliance, will delve deeper into the opportunities in Packaging Materials in Catering. National Engineering Research Center of Novel Equipment for Polymer Processing will join hands with Guangzhou Huaxinke Intelligent Manufacturing Technology Co., Ltd., Jiangsu Photovoltaic Industry Association, China Plastic Film web to hold "Embracing a



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Applications in Focus will once again gather a wide range of brands, universities and research centers, showcasing their cutting-edge applications across

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Arburg: focus on mobility and automation

At Chinaplas, Arburg will present itself as a comprehensive technology and system partner for the efficient production of plastic parts. At stand D 42 in hall 4.1, the focus will be on applications for the automotive and medical industries. Three Allrounder exhibits will demonstrate the fully automatic overmoulding of inserts, the processing of liquid silicone (LSR) and the production of sophisticated medical components. In addition to injection moulding technology, Arburg will showcase additive manufacturing and automation and offer trade visitors comprehensive and individual advice in the interactive arburgSOLUTIONworld exhibition area.

“ At Chinaplas 2024, we will be exhibiting in the same hall as the Asian injection moulding machine manufacturers for the first time, bringing us even closer to our local customers. The mobility sector in particular, and especially electric vehicles in the mid and upper price segments, are successful in the Chinese market. This is why we have focused our exhibits on this area,” emphasises Zhao Tong, Managing Director of the Arburg organisations in China. “At arburgSOLUTIONworld, we are pooling our consulting expertise at the trade fair stand. China has built the world’s largest 5G network and digital transformation is currently a hot topic for our customers. Our experts will be on hand to answer questions and present our digital products as well as automation solutions and services.”

arburgSOLUTIONworld

The unique interactive exhibition area “arburgSOLUTIONworld” is not only an eye-catcher, but also offers trade visitors real added value. Arburg experts will be on hand at five stations around a four-metre-high LED column to provide customised consultations - for example on the use of the arburgXworld customer portal and the Arburg host computer system ALS. Other key topics include increasing efficiency through automation, advice on injection moulds, the arburgGREENworld sus-

tainability programme and all aspects of service and training.

Injection moulding highlights and automation

At the Arburg Technology Factory Pinghu, machines are built to customer specifications, automated if necessary and tested intensively. This also applies to the Chinaplas exhibits, where automation components and moulds also come from Asian suppliers. This includes an Allrounder 1600 T rotary table machine, which overmoulds metal inserts with glass fibre-reinforced PA6 in a 4-cavity mould from Concraft to produce connecting parts for the mobility sector. The demanding handling tasks in this turnkey system are performed by a Kuka six-axis robot.

The Allrounder 470 H with innovative hybrid machine technology is another highlight. It is particularly good at saving energy and conserving resources, and is efficient in production, user-friendly and reliable. The new machine from the Hidrive series was presented for the first time in the anniversary year 2023 and has been available worldwide together with the sizes 520 and 570 since spring 2024. The exhibit manufactures adapters from polycarbonate for medical technology and is automated with a Flexlift. This linear robotic system from Arburg is



Zhao Tong, Managing Director Arburg China.

designed as an entry-level solution for the automated production of moulded parts and is available exclusively for the Asian market.

The third injection moulding exhibit, an electric Allrounder 470 E Golden Electric, produces precise LSR components for the automotive industry. The machine is equipped with an 8-cavity mould and is also automated with a Flexlift linear robotic system.

Industrial additive manufacturing

At Chinaplas 2024, Arburg will be demonstrating the benefits and added value that can be achieved through industrial additive manufacturing with a Freeformer. Using Arburg Plastic Freeforming (APF), functional parts, operating equipment and robotic grippers can be 3D printed based on original plastic granulates, even from very soft materials and in hard/soft combinations.

Chinaplas is the most important trade fair in Asia for Arburg. From 23 to 26 April 2024, Arburg will present itself at stand D 42 in hall 4.1 as a comprehensive technology and system partner for the efficient production of plastic parts.



www.arburg.com

chinaplas 2024: stand D42 hall 4.1

ARBURG: 重点关注交通出行和自动化

ARBURG (阿博格) 将在计划于 2024 年 4 月 23 日至 26 日举办的中国国际橡塑展 (CHINA PLAS) 上展示自己作为高效塑料制品整体技术和系统合作伙伴的强大实力。公司将在位于 4.1 展厅的 D 42 展台上重点展示汽车和医疗领域内的各类广泛应用。三台 ALLROUNDER 注塑机展示嵌件的全自动包胶注塑、液态硅橡胶 (LSR) 的加工以及复杂医疗部件的制造。除了注塑工艺之外, ARBURG (阿博格) 还将展示增材制造和自动化产品和服务, 并在 ARBURG SOLUTION WORLD 互动展区为专业访客提供全方位和个性化的咨询。

“在 2024 年的中国国际橡塑展上, 我们将首次在注塑机展馆, 这将进一步拉近我们与本地客户的距离。特别是在交通出行以及中高端电动汽车领域, 我们已在中国市场取得了成功。这两大领域也是我们本次展会关注的重点。” Arburg (阿博格) 中国区总经理佟朝强说。“在 arburg SOLUTION world 中, 我们将通过展台集中展示我们在咨询领域内的专业能力。中国已建成了全球最大的 5G 网络, 数字化转型也是目前客户最关心的话题之一。我们的专家能够就相关问题作出专业解答, 并展示我们的数字化产品以及自动化解决方案和服务。”

arburg SOLUTION world

布置独特的互动展区 “arburg SOLUTION world” 不仅引人注目, 而且也可以为专业访客带来真正意义上的附加价值。展区中央有一根四米高 LED 柱, 周围设置了五个咨询站点, 您可以从各个咨询站点的 Arburg (阿博格) 专家那里获得专业建议——例如关于使用 arburg Xworld 客户门户网站及 Arburg (阿博格) 中央生产管理系统 ALS 的建议。我们也安排了其他重要主题, 其中包括通过自动化提高效率、模具咨询、arburg GREEN world 可持续发展计划以及与服务和培训相关的所有内容。

注塑亮点和自动化

Arburg (阿博格) 在平湖设立了技术工厂, 主要对德国进口注塑机根据客户的要求加装, 并设计和生产配套自动化及严格测试。这次参加中国国际橡塑展的展品都在平湖工厂进行安装及测试。其自动化组件和模具都来自中国合作伙伴。其中一台 Allrounder 1600 T 转盘机, 使用昆山康龙公司的



Mitchell Yang has been the new Managing Director of Arburg in Taiwan since 1 February 2024. He succeeds Michael Huang, who established the subsidiary in 2015 and has been growing it ever since.

的 4 腔模具使用玻纤增强 PA6 将金属嵌件包胶注塑, 制成汽车连接器。这套交钥匙系统中的高要求搬运任务由 Kuka 六轴机械手完成。

另一个亮点就是液电混合注塑机 Allrounder 470 H。这台机器在节能、节约资源、高效生产方面表现突出, 便于操作且安全可靠。Hidrive 系列的新款机器于 2023 年阿博格百年庆上首次亮相, 并与型号 520 和 570 一起从 2024 年春季开始在全球上市。这台展品可生产用于医疗技术的 PC 三通组件并通过 Flexlift 机械手实现自动化。Arburg (阿博格) 的这款线性机械手系统专为自动化注塑件生产设计, 专供亚洲市场使用。

第三台注塑展品是黄金版电动机 Allrounder 470

E Golden Electric, 它可为汽车行业生产精密的液态硅橡胶部件。这台机器配备一个 8 腔模具, 同样也通过 Flexlift 线性机械手系统实现自动化。

工业增材制造

在 2024 年中国国际塑料橡胶工业展览会上, Arburg (阿博格) 将通过 Freeformer 展示工业增材制造可实现的优势和附加价值。在 Arburg (阿博格) 塑料无模成型技术 (AKF) 中, 功能部件、生产装备和机械手夹具都能以原始塑料颗粒为基础进行 3D 打印, 甚至可以采用非常柔软的材料和硬胶/软胶结合。

About Arburg

German family-owned company Arburg is one of the world's leading manufacturers of plastic processing machines. Its product portfolio encompasses Allrounder injection moulding machines with clamping forces of between 125 and 6,500 kN, the freeformer for industrial additive manufacturing and robotic systems, customer and industry-specific turnkey solutions and further peripheral equipment.

Arburg is a pioneer in the plastics industry when it comes to energy and production efficiency, digitalisation and sustainability. The “arburgXworld” program comprises all digital products and services and is also the name of the customer portal. The company's strategies regarding the efficient use of resources and circular economy, as well as all related aspects and activities, are outlined in the ‘arburgGREENworld’ program.

Arburg's main aim is to enable its customers to manufacture their plastic products, from one-off parts to large-volume batches, to optimum quality standards and in a way that conserves resources, is sustainable and minimises unit costs. Target groups include the automotive and packaging industries, communication and entertainment electronics, medical technology and the white goods sector.

First-class customer support on-site is guaranteed by the international sales and service network: Arburg has own organisations in 26 countries at 36 locations and is represented in over 100 countries together with trade partners. Its machines are produced at the company's German headquarters in Lossburg. Of a total of roughly 3,800 employees, around 3,200 work in Germany, with another 600 employees based in Arburg's organisations around the world. Arburg is certified to ISO 9001 (quality), ISO 14001 (environment), ISO 27001 (information security), ISO 29993 (training) and ISO 50001 (energy).

Further information about Arburg can be found at www.arburg.com

Allrounder 470 H: Turnkey system produces adapters for medical technology

As a prime contractor, Arburg very successfully realises turnkey systems in China and Asia. A perfect example of this will be a production cell centred around a hybrid Allrounder 470 H at Chinaplas 2024. The exhibit uses a family mould to produce two different adapters for medical technology fully automatically, including camera inspection and sample part storage. A Flexlift 10+2 linear robotic system, only available in Asia, performs the handling tasks.

The turnkey system, which was designed in the Arburg Technology Factory (ATF) Pinghu, China, and realised together with local partners, is a typical customised solution for the Asian market.



Efficient and customisable: The new hybrid Allrounder H is available in sizes 470, 520 and 570, each in the "Comfort", "Premium" and "Ultimate" performance variants.

Hybrid machine technology reduces costs and cycle times

Launched on the market in 2023, the hybrid Allrounders from the Hidrive series with new hybrid machine technology combine an electric, energy-efficient and precise clamping unit with a powerful and dynamic hydraulic injection unit. They are available in sizes 470, 520 and 570 with clamping forces of 1,000, 1,500 and 2,000 kN and in the "Comfort", "Premium" and "Ultimate" performance variants. Allrounder Hidrive machines are particularly good at saving energy and resources, and are also production efficient, reliable and user-friendly. They are particularly impressive due to their reduced purchase and operating costs, optimised energy footprint as well as reduced cycle times. Thanks to a wide range of options, the machines can be precisely customised to specific requirements. Smart assistants and robotic systems can be integrated into the Gestica control system.

The Chinaplas exhibit is an Allrounder 470 H with a clamping force of 1,000 kN and a size 290 injection unit in the "Comfort" performance variant. It is also

Arburg is offering the Flexlift only for the Asian market. The new linear robotic system is available with loads of 5, 10 and 15 kilograms - each with the option of one or two vertical axes.



equipped with an Arburg servo hydraulic system (ASH) as standard.

Automated production of medical devices

For the production of adapters for medical technology the hybrid Allrounder 470 H is equipped with a 2+2-cavity family mould from Chinese company Changshen. It produces two different components from PC for adapters in medical technology in a cycle time of around 25 seconds. A Flexlift 10+2 linear robotic system performs the handling tasks. After they have been removed from the mould and sepa-



Arburg realises turnkey systems for Asia at its Technology Factory (ATF) in Pinghu, China. Including the production cell that will use a family mould to produce various adapters for medical technology at Chinaplas 2024.



rated from the sprues, the moulded parts are fed to an integrated camera for inspection and deposited separately by cavity. In addition, a test sample can be placed in a sample part drawer at the touch of a button and sent for quality control.

Only for Asia: Linear Flexlift robotic system

Arburg has developed the Flex series of linear robotic systems specifically for the Asian market and tailored them to the needs of customers in the region. Thanks to its low height and telescopic design, it is also suitable for confined spaces. Powerful servo motors ensure that the vertical mould-entry axes are extremely dynamic and accurate – enabling fast removal, precise and vibration-free movements and short cycle times. Arburg is meeting the market's demand for a reliable, fast and precise robotic system with an impressive price/performance ratio. The Flexlift is available in six different versions with loads of 5, 10 or 15 kilograms and with the option of one or two immersible axes.

A Flexlift 10+2 with a load of ten plus two kilograms is used for trade fair applications. For the gentle removal of moulded parts and sprue, a Freeformer 300-3X was used to additively manufacture the associated gripper quickly and cost-effectively. There are also easily accessible pneumatic and vacuum interfaces for end-of-arm tooling (EOAT) and peripheral technology.

www.arburg.com

ALLROUNDER 470 H：制造医疗三通组件的交钥匙系统

作为中国和亚洲市场的交钥匙系统总承包商，ARBURG（阿博格）在 2024 年中国橡塑展上展示了一个典型案例，即一套以一台液电混合注塑机 ALLROUNDER 470 H 为核心的自动化系统。这台展品通过一个子母模全自动生产出两个不同的医疗三通组件，系统还包括摄像检测和样品放件。取放件由专供亚洲市场使用的线性机械手系统 FLEXLIFT 10+2 执行。

这套交钥匙系统是专门为亚洲市场定制的经典解决方案，由 Arburg（阿博格）平湖技术工厂设计并生产。

液电混合注塑机缩减了成本和循环时间

2023 年推向市场的 Hidrive 系列液电混合 Allrounder 注塑机采用全新的液电机器技术，将节能且精准的合模单元与动力强劲且可动态调整的液压注射单元结合在一起。该系列有 470、520 和 570 三种型号，合模力也有 1000 kN、1500 kN 和 2000 kN 三种，并且每一种都提供“舒适版 (Comfort)”、“卓越版 (Premium)”和“终极版 (Ultimate)”这些驱动配置。Hidrive 系列的 Allrounder 在节能、节约资源、高效生产方面表现出色，便于操作且安全可靠。特别值得一提的是，这些机器不仅降低了采购和运营成本，还优化了能量平衡，并缩短了循环时间。得益于众多选项，这些机器完全能够适配各项要求。Gestica

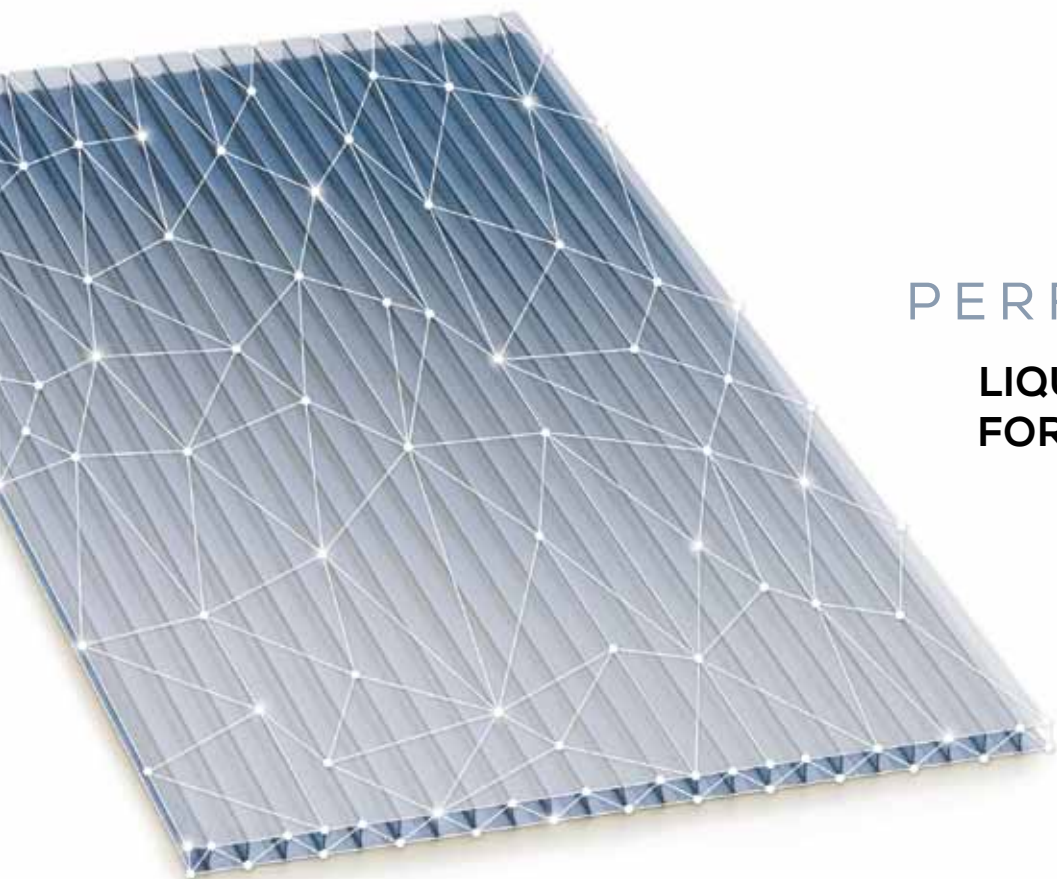
控制系统可以集成智能辅助功能和机械手系统。中国橡塑展上的这台展品是一台合模力为 1000 kN 且注射单元尺寸为 290 的“舒适版 (Comfort)” Allrounder 470 H，标配了 Arburg（阿博格）伺服液压系统。

全自动生产医疗产品

这台液电混合注塑机 Allrounder 470 H 配备了深圳长盛公司的 2+2 腔子母模生产医疗三通组件。在大约 25 秒钟的循环时间内，可以制造出两个不同的 PC 组件，组装成医疗三通组件。取放件由一套线性机械手系统 Flexlift 10+2 执行。从模具中取出并分离浇口之后，机械手系统将注塑件放置到集成的摄像检测装置中，接着按照型腔分开放件。另外，按下按钮即可将一个样品存放到样品抽屉中，接着输送到质量检测装置。

亚洲市场专供：Flexlift 线性机械手系统

Flexlift 系列线性机械手系统是 Arburg（阿博格）专门为亚洲市场开发的，并且完全符合这一地区客户的需求。由于建造高度较低，且采用伸缩式结构，该系列也适用于空间狭小的场所。性能强大的伺服电机确保垂直进入模具的轴兼具高动力性和精准性，实现快速取出、精确且无振动的操作以及更短的循环时间。因此，Arburg（阿博格）可以满足这一市场对可靠、快速和精准工作机械手系统的需求，所提供的性价比也令人信服。Flexlift 提供六种不同的型号：净载重分别为 5 公斤、10 公斤或 15 公斤，还支持分别选装一根或两根垂直轴。在此次展览会上，使用的是一台净载重为十公斤和两公斤的 Flexlift 10+2。为了能够轻柔地取出注塑件和浇口，配套夹具通过一台 Freeformer 300-3X 增材制造而成，不仅速度快，还节省成本。此外，还具有易于触及的气动系统和真空接口，适用于机械手末端夹爪 (EAOT) 和周边产品技术。



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Innovative Hot Runner Solutions with Oerlikon HRSflow

Oerlikon HRSflow is glad to announce its participation in Chinaplas 2024, taking place in Shanghai from April 23rd to April 26th, Hall 5.2 booth F71.

MULTIflow: The multi-cavity line for low shot weights

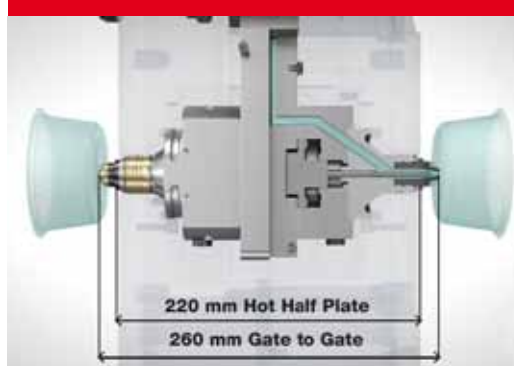
The multi-cavity line for low shot weights, recently named MULTIflow HRS, is suitable for packaging, caps and closure as well as medical applications, manufactured with engineering polymers for technical components. Some of the main benefits include fast cycle time, high production volume, processing of PCR compounds and biopolymers, quick colour change and an excellent finish of the molded parts. As an example of this new line, we will showcase a hot runner system Tp series with 16 drops, PGY end ring, along with captivating applications for small plastic parts from 0.5. To 20 gr.

Oerlikon HRSflow will show the Vf nozzle series, designed for fast cycle times (2.2 to 3.5 seconds) and maximum process reliability. Specifically developed for HDPE caps and closures, these nozzles support part weights from 0.5g to 8g, ensuring consistent quality, rapid color changes, and system restarts. With optimized gate control and separate replaceability for quick maintenance, they offer efficient performance.

The new X Nozzle Series for thin-walled packaging

Tailored for thin-wall packaging applications, our X series valve gate nozzles withstand high filling pressures with precision, ensuring rapid injection and cycle times for uniform part weight. The Xp line

Stack system equipped with the new Xd nozzle for TWP applications



offers a single-face option, while our latest patent-pending solution, the Xd line, meets evolving industry needs for stack systems. Oerlikon HRSflow's new stack mold system aligns with circular economy requirements. Its innovative, easy-to-assemble design minimizes downtime and allows flexible use across various applications, even in smaller injection molding machines; for this reason, it can be included in plug-and-play solutions. The system, perfect for high filling pressures, is equipped with nozzles of the new Xd series, engineered for thin wall packaging applications and mounted on a 220 mm hot half plate.

Sustainability

Oerlikon HRSflow aims to develop hot runner systems for sustainable applications, enhancing ef-

iciency in injection molding. Challenges include preserving bio-based and biodegradable polymers' integrity in high temperature and shear conditions, ensuring short cycle times and good gate quality. Designing hot runner systems for recycled compounds involves preventing damage from melt impurities and eliminating streaking or flow marks that could affect cosmetic and functional molding results. These principles are illustrated through collaborative applications realized by Oerlikon HRSflow in partnership with its customers.

The 3-component coffee-to-go cup project exemplifies the houseware industry's commitment to environmental stewardship through sustainable materials and innovative molding technologies. Collaboration with partners Wittmann Battenfeld, Haidlmair, Borealis, and Oerlikon HRSflow highlights collective efforts for a more eco-friendly future. Production involves a rotational mold with three separate injection units optimized for 100% recyclable PP. The cup, with a 2mm thickness, is produced in clear optic and over-molded with an insulated shell.

Systems from Oerlikon HRSflow in action
Systems from Oerlikon HRSflow can be experienced live on the exhibition stands of ENGEL (Hall 5.1, Booth C42, PMMA lightguide realized with FLEXflow HRS technology in a family mold), YZUMI (Thickwall lens with 6 layers).

www.oerlikon.com/hrsflow
Chinaplas 2024: Hall 5.2 booth F71

MULTIflow HRS systems



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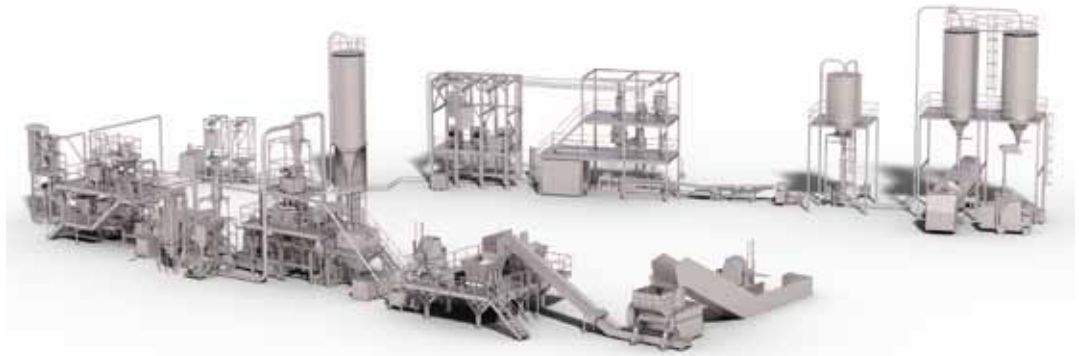
TRACER 200 X

Coperion and Herbold Meckesheim at Chinaplas 2024

Pioneering Technologies for Plastics Compounding and Recycling

Stuttgart, March 2024 – At this year's Chinaplas (23-26 April 2024, National Exhibition and Convention Center (NECC), Hongqiao, Shanghai, PR China) Coperion will present key technologies for processing plastics at Booth F 106 in Hall 2.1. The centerpiece of the exhibits will be the STS 75 Mc PLUS twin screw extruder with its increased specific torque of 13.6 Nm/cm³ which allows the STS extruder to achieve up to 20% more throughput with markedly higher product quality. Together, Coperion and Herbold Meckesheim offer operators broad expertise in technology and process solutions for plastics recycling. Since their merger, both companies have continued to develop and optimally attune their technologies so that entire systems excel in operation with extremely high efficiency. At Chinaplas, Coperion and Herbold Meckesheim will display a virtual PET recycling installation. Visitors to the booth can peer inside key components of the recycling installation and see for themselves the process-technical details in each process step and the high efficiency of each component.

Other exhibits at Booth F106 in Hall 2.1 include the Coperion ZSK 26 Mc18 twin screw extruder with a Coperion K-Tron K-ML-SFS-KT20 twin screw feed-



*The reliability of plastics recycling machinery from Coperion and Herbold Meckesheim excels, achieving very high recyclate product quality.
Photo: Coperion, Stuttgart Germany*

er, a Coperion K-Tron T35-QC quick change feeder shown with a 2415 vacuum receiver for refilling ingredients, and a C/S-LW-NT28 twin screw feeder from Colormax Systems. In addition, Coperion K-Tron will be introducing the ProRate PLUS line of gravimetric single and twin screw feeders to the Chinese market, showing a PLUS-S feeder with re-

fill. A CVH 550 high pressure rotary valve for granulates will also be on display.

STS 75 Mc PLUS: Higher Throughput with Improved Compound Quality

For the STS 75, Coperion has raised the specific torque of the STS twin screw extruder from 11.3



*The new Coperion STS 75 Mc PLUS twin screw extruder achieves up to 20% greater throughput with improved product quality, at an increased specific torque of 13.6 Nm/cm³.
Photo: Coperion, Stuttgart Germany*



The ProRate PLUS feeder line with refill solutions are simple, robust and reliable. Photo: Coperion K-Tron, Switzerland

Nm/cm³ to 13.6 Nm/cm³. The compounder thus achieves improved product quality and at the same time up to 20% higher throughput in every application. Critical to this level of performance, along with process-technical modifications, is optimization of the drive's key components. The new STS 75 Mc PLUS extruder is equipped with a high-power motor and a gearbox designed specifically for the high torque. Proven high-performance materials for the screw shafts ensure full torque transmission from the gearbox to the screw elements.

The higher fill level in the process section is crucial to the improved compound quality that the STS 75 Mc PLUS achieves. It reduces both shear stress and melt temperature and improves mixing behavior. The result is an extremely gentle product handling at high throughputs. The process section of the STS 75 Mc PLUS is equipped with heating cartridges that generate heat very energy-efficiently exactly where it is needed.

STS extruders combine the advantages of substantially standardized and thus more cost-effective machine construction incorporating Coperion's technical expertise. In the continued development of the STS 75 Mc PLUS, Coperion has profited from the comprehensive experience gleaned from its high-end ZSK Mc18 extruders. The new STS 75 Mc PLUS's throughput increase of up to 20% makes it a particularly economical solution. Material costs per kilo drop and return on investment is reached much more quickly. Coperion retained the proven

Do:Di = 1.55 ratio of outer to inner screw diameter unchanged, thus ensuring secure scale-up to other STS model sizes.

Complete Plastics Recycling Plants from a Single Source

Coperion and Herbold Meckesheim realize plants for a wide variety of plastics recycling applications, excelling in their reliability and the high product quality they achieve. 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 recycling process chain.

Together, Coperion and Herbold Meckesheim offer solutions for mechanical recycling of post-industrial and post-consumer waste, chemical recycling, solvent-based recycling, and deodorization, tailored to the type of plastic being recycled.

Coperion K-Tron Feeders for Maximum Flexibility

Coperion will demonstrate its expertise in all feeding tasks at this year's Chinaplas with its high-accuracy Coperion K-Tron K2-ML-D5-T35 Quick Change feeder equipped with ActiFlow™ smart bulk solid activator and EPC (Electronic Pressure Compensation). The feeder is equipped with a 2415 vacuum receiver for refill. The T35/S60 quick change feeder (QC) on display is designed for applications requiring quick changeover of materials and convenience of fast cleaning. The QC feeder allows for fast removal of the entire feeding module with screws in place for replacement with a second unit. Twin and single screw feeding modules are available.

The ActiFlow™ smart bulk solid activator offers an innovative method to reliably prevent bridging and rat-holing of cohesive bulk materials in stainless steel hoppers without internal hopper agitation. The smart flow aid applies gentle vibrations to the hopper wall, hereby carefully activating the contained material with the optimal amplitude and frequency, automatically adjusted by the controller based on bulk material flow. It is designed specifically to work with Coperion K-Tron's line of gravimetric loss-in-weight feeders.

The 2400 Series vacuum receivers provide a high-capacity sequencing system primarily used where larger conveying rates or long distances are re-



Coperion K-Tron introduces a reliable, high-accuracy feeding solution in its K2-ML-D5-T35 gravimetric feeder. Photo: Coperion K-Tron, Switzerland

quired, in applications with one or multiple destinations. They are designed to high quality standards for pneumatically conveying powder, pellets and granular materials for most industries. Conveying rates range from 327 to 6,804 kg/h (720 to 15,000 lb/h). The 2415 pellet receiver will be on display at Chinaplas 2024.

Additionally, Coperion will display the preconfigured size S ProRate PLUS single screw feeder, equipped with a 2410 receiver for refill. This continuous gravimetric feeder is very robust and stands out for its good price-to-performance ratio. The ProRate PLUS line was designed as an especially economical solution for reliably feeding free-flowing bulk materials. Coperion has expanded the ProRate PLUS feeder line with a PLUS-MT twin screw feeder especially for feeding powders.

About Coperion

Coperion (www.coperion.com) is a global industry and technology leader in compounding and extrusion systems, sorting, size reduction and washing systems, feeding systems, bulk material handling and services. Coperion develops, produces, and services plants, machinery, and components for the plastics and plastics recycling industry as well as the chemical, batteries, food, pharmaceutical and minerals industries. Coperion employs more than 5,000 people in its three divisions, Polymer, Food, Health & Nutrition, and Aftermarket Sales & Service, and in its over 50 sales and service companies worldwide. Coperion is an Operating Company of Hillenbrand (NYSE: HI), a global industrial company that provides highly-engineered, mission-critical processing equipment and solutions to customers serving a wide variety of industries around the world. www.hillenbrand.com

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科倍隆和HERBOLD MECKESHEIM参展 CHINAPLAS 2024

塑料配混和回收的技术先锋

在今年的中国国际橡塑展 Chinaplas 上 (2024年4月23-26日 | 中国, 上海, 虹桥, 国家会展中心), 科倍隆将在2.1号馆F106展位展示其在塑料加工方面的核心技术。本次展出的核心是STS 75 Mc PLUS双螺杆挤出机, 其 13.6 Nm/cm^3 的比扭矩提升了STS挤出机20%的产能, 并且产品质量也显著提高。

同时, 科倍隆和Herbold Meckesheim为制造商提供丰富的专业技术知识和塑料回收的工艺解决方案。自合并以来, 两家公司一直不断在开发和优化他们的技术, 使整套系统以非常高的效率运行。在这次的国际橡塑展上, 科倍隆和Herbold Meckesheim将展示一套虚拟PET回收系统。参观者可以看到回收系统的内部核心部件, 并亲眼看到每个加工步骤的工艺技术细节和高效的部件。本次展会展出的还有科倍隆ZSK 26 Mc18双螺杆挤出机搭配一台科倍隆楷创K-ML-SFS-KT20双螺杆喂料机, 卡尔麦系统的C/S-LW-NT28双螺杆喂料机会和STS 75 Mc PLUS挤出机一起展出, 一台科倍隆楷创T35-QC快拆式喂料机搭配一台用于补料的2415真空上料机。另外, 科倍隆楷创还将向中国推出ProRate PLUS系列失重式单螺杆和双螺杆喂料机, 此次将展出一台带补料功能的PLUS-S喂料机。除此之外, 一台用于粒料的CVH550高压阀也将一同展出。

STS 75 Mc PLUS: 改进配混质量, 提高产能

针对这款STS 75, 科倍隆将STS双螺杆挤出机的比扭矩从 11.3 Nm/cm^3 提升到了 13.6 Nm/cm^3 。配混制造商因此可获得更高的产品质量, 并且同时每种应用都能提高20%的产能。要达到这种性能水平以及工艺技术改进的关键是优化驱动段的核心部件。这款新STS 75 Mc PLUS挤出机配备了一款更高功率的电机和根据其高扭矩专门设计的传动箱。芯轴采用高性能材料确保了从传动箱到加工段充分的扭矩输出。

加工段的高填充水平对STS 75 Mc PLUS实现优异的配混质量至关重要。它能同时减少剪切应力和降低熔融温度并且提高了混合性能。其结果是实现高产量的同时有着非常柔和的物料处理。STS 75 Mc PLUS加工段配备的加热棒可以在任何需要的部位高效地加热。

STS挤出机具备基本标准化的优势, 结合科倍隆的技术专业知识, 从而使设备结构更具成本效益。在STS 75 Mc PLUS的开发过程中, 科倍隆从其高端产品ZSK Mc18中获得了全面的经验。这款新的STS 75 Mc PLUS的产能提高了20%, 使其成为一种特别经济的解决方案。每公斤材料成本的下降, 投资回报更快。科倍隆保持螺杆内外径比 ($Do:Di = 1.55$) 不变, 确保工艺可精准放大到STS系列的其他尺寸机型。

单一供应商提供的全套塑料回收系统

科倍隆和Herbold Meckesheim共同实现了一个

各种塑料回收应用的工厂, 他们在可靠性和高产品质量方面表现出色。从机械加工——塑料的粉碎、洗涤、分离、干燥和团粒——到散装物料处理、喂料和挤出, 再到配混和造粒, 涵盖了回收塑料的整个工艺链。

同时, 科倍隆和Herbold Meckesheim为工业后和消费后废料的机械回收、化学回收、溶剂回收和除臭提供了解决方案, 并根据回收的塑料类型量身定制。

设计, 对于流动性差尤其黏性物料, 无需在不锈钢料斗内使用搅拌器, 可有效避免架桥和老鼠洞的形成。该智能流化器通过对料斗壁施加轻微振动, 从而以理想的振幅和频率小心地为料斗内的物料提供流化动力, 由控制器根据物料流自动调节。它专为科倍隆楷创失重式喂料机设计。

2400系列真空上料机可为大产量, 远距离输送物料到一个或多个目的地的时, 提供大容量的测序系统。他们是为散装物料处理行业气力输送粉料、



灵活多样的科倍隆楷创喂料机

在今年的国际橡塑展上, 科倍隆还将通过科倍隆楷创高精度K2-ML-D5-T35快拆式喂料机, 装有智能物料振动流化器ActiFlow™和压力补偿系统(ECP)来展示其在所有喂料任务中的专业技能。该喂料机还配备了一台用于补料的2415真空上料机。T35/S60快拆式喂料机(QC)专为快速更换物料和方便清洗的需求而设计。快拆式喂料机(QC)可以快速移除整个带有螺杆的喂料模块, 并快速安装上另一套合适的螺杆喂料模块。这种快拆式设计对双螺杆和单螺杆喂料模块都适用。ActiFlow™智能物料振动流化器是一款革命性的

颗粒料而设计的高品质产品, 其输送率范围从327到6,804 kg/h (720到15,000 lb/h)。此次展出的是2415粒料上料机。

此外, 科倍隆还将展示一台预配置尺寸S的ProRate PLUS单螺杆喂料机, 搭配用于补料的2410上料机。这种连续称重的喂料机非常坚固, 并因其高性价比脱颖而出。ProRate PLUS生产线被设计成一种特别经济的解决方案, 用于流动物料的可靠喂料。科倍隆通过PLUS-MT双螺杆喂料机扩展了ProRate PLUS喂料机产线, 尤其适用于粉料的喂料。

科倍隆集团

科倍隆 (www.coperion.com) 是配混和挤出系统、分拣、破碎和清洗系统、喂料系统、物料输送和服务领域的全球行业和技术领军者之一。科倍隆研发、制造和维护用于塑料和塑料回收行业以及化学、电池、食品、制药和矿物行业的系统、设备和零部件。在聚合物、食品、健康与营养、售后市场销售与服务三大事业部, 科倍隆拥有5,000名员工以及50家销售和服务公司。科倍隆是Hillenbrand (纽约证券交易所代码: HI) 的运营公司, Hillenbrand是一家全球性工业公司, 为全球各行各业的客户提供高度集成化的核心工艺加工设备和解决方案。

www.hillenbrand.com

BOY presence at Chinaplas 2024 in the Far East

BOY will show at Chinaplas two small injection moulding machines in Hall 2.1 at booth number F92. Chinese representative, Andeli Co., Ltd. will present two medical special parts to the visitors.



On a BOY 25 E a screw made of PEEK will be produced which is intended to be implanted into the tendon sheath area. The individual weight of the part is 0.093 g only and the mould is operated with two cavities for high-precision injection.

On a BOY XS an osteosynthesis-plate with a single-cavity, sprueless mould will be produced. This part is frequently used in the orthopaedic industry for the fixation of the skeleton. The individual weight of 0.05 g with a cycle time of just 4.7 seconds requires a high level of repeatability of the machine.

The BOY 25 E is a two-bar, fully-hydraulic reciprocating injection moulding machine with a two-platen clamping unit and a swivelling injection unit. This machine is not only the most compact one of its kind with the lowest machine hour rates, the price/performance ratio is remarkable, too. With the plasticising unit EconPlast, available as an option, the energy consumption of a BOY 25 E will be significantly reduced. Five injection units in differ-

ent sizes with screw diameters from 14 mm to 32 mm guarantee a precise manufacturing of injection moulding parts with a parts weight of up to 69.5 g (PS).

The BOY 25 E can process a wide range of thermoplastics, elastomers, silicones and thermosets as well as metals and ceramics (PIM technology). With a clamping force of 100 kN on a footprint of 0.78 m², the BOY XS sets standards in continuous industrial operation. The compact and highly energy-efficient injection moulding machine with its innovative and proven technologies offers a wide range of applications in micro and sprueless injection moulding of small parts. With an efficiency classification of 7+ according to Euromap 60.1, the BOY XS only requires 0.49 kWh of energy per kilogramme of material processed.

The intelligent design is perfectly adapted to the requirements of micro injection moulding. A 12 mm plasticising unit (optional: screw diameters from 8 to 18 mm available) ensures the shortest dwell

times - a major advantage for the gentle processing of temperature-sensitive materials.

Company profile

Dr. Boy GmbH & Co. KG is one of the leading worldwide manufacturers of injection moulding machines with clamping forces up to 1,250 kN. The very compact, durable machines work precisely, energy-saving and thus highly economically. With innovative concepts and solutions, BOY has proved itself again and again as a trendsetter. Automation, digitalisation as well as sustainability and CO₂ savings are particularly in focus. Since the company was founded in 1968 more than 50,000 Injection Moulding Machines have been delivered worldwide. The privately-owned company continues to put special emphasis on engineered performance and high-class "made in Germany" workmanship.

<http://www.dr-boy.de/>
Chinaplas 2024: Hall 2.1 booth F92

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MCC Label showcases IML product offering

MCC Verstraete, MCC Korsini and MCC Karydakis, part of Multi-Color Corporation and leading players in the in-mold labeling (IML) industry with several locations around the world, is pleased to announce its own booth at this year's Chinaplas 2024.

Chinaplas, the world's leading exhibition for the plastics and rubber industry, will be held in Shanghai from April 23-26. Known worldwide for its groundbreaking innovations and providing a stage for the latest technological developments, the event offers companies such as MCC an excellent platform to showcase their products, services, and expertise to an international audience. MCC's three leading IML companies (MCC Verstraete, MCC Korsini & MCC Karydakis), will showcase their extensive product range, sustainable packaging solutions and creative possibilities. Visitors to the booth can expect to be immersed in a world of innovation, with the opportunity to discover the power of IML and explore its benefits for various applications in the packaging industry. "We are excited to participate in Chinaplas 2024 and showcase our comprehensive portfolio of IML solutions to an international community of plastics and rubber professionals," said Murat Akbulut, IML Sales Director Asia Pacific at MCC. "This event provides us with an opportunity to network, share knowledge and explore new business opportunities,



and we look forward to sharing our passion for innovation and excellence with show attendees." Visitors are invited to visit MCC's IML booth at G72 in Hall 4.1 during Chinaplas 2024 to learn more about their customized IML solutions and the benefits they can bring to various industries and applications.

What to expect:

1. Discover our extensive product range, including

breakthrough in-mold labeling (IML) innovations that are driving the circular economy for PP packaging.

2. Sustainability Solutions: Discover how we can make your packaging more sustainable with our innovative solutions.

3. World Market Leadership: Gain insight into our groundbreaking vision for IML, which has positioned us as a world market leader in the industry.

MCC Verstraete are MCC Karydakis and MCC Korsini. Together they have over 55 years of experience in label printing for injection molding, blow molding and thermoforming. Thanks to in-depth knowledge of materials, innovation and sustainability, they produce more than 80 million injection molded labels daily for numerous segments within the packaging industry.

Don't miss the opportunity to take a deep dive into the very best that IML has to offer at Chinaplas 2024!

iml.mcclabel.com

Chinaplas 2024: Booth: 4.1 G72





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JEC World 2024: realising net-zero ambitions with composites

The 2024 edition was the biggest JEC World ever, attracting 43,500+ professional visits from more than 100 countries and 1.300 exhibitors

JEC World 2024 closed its doors after three vibrant days of business, expertise and knowledge sharing, highlighting the contribution of the composites industry to a more sustainable world as well as its growth potential. The 2024 edition was the biggest JEC World ever, attracting 43,500+ professional visits from more than 100 countries and 1.300 exhibitors, and featuring seminars, workshops, live demos, and insights from hundreds of industry visionaries.

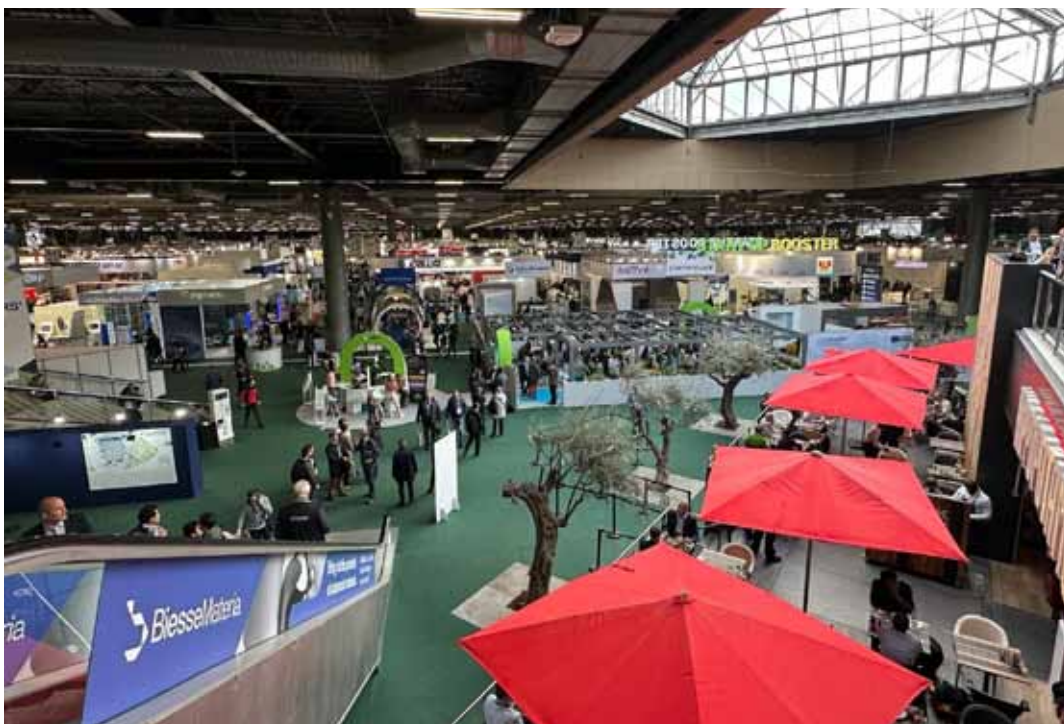
JEC World, the industry Think Tank

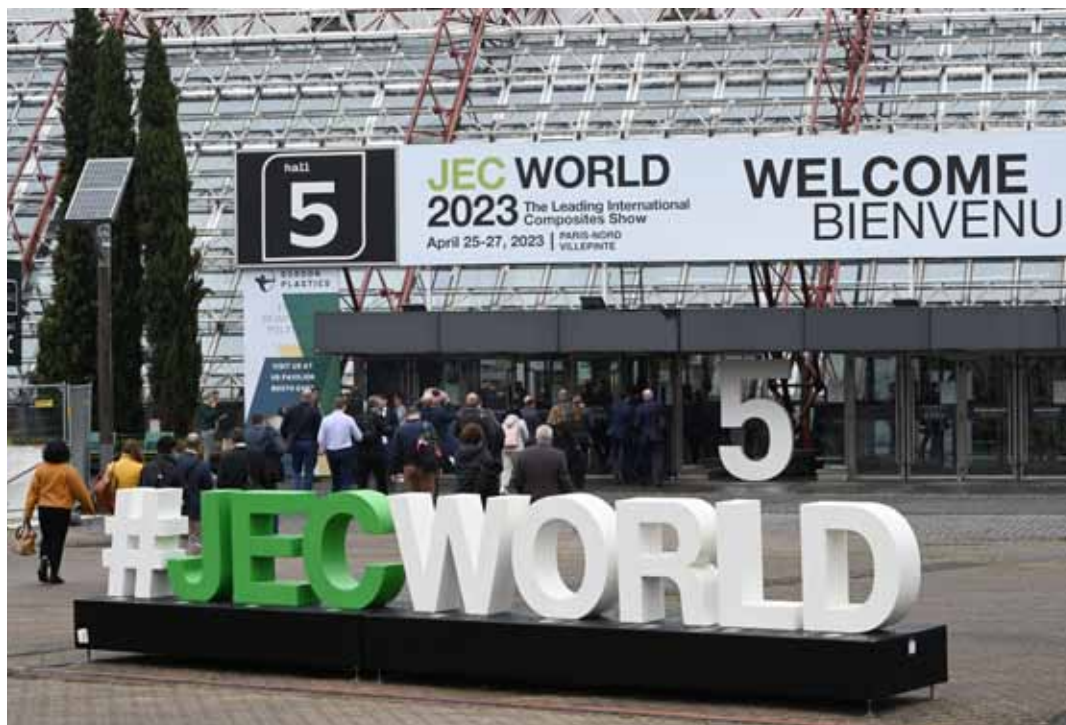
During the three days of the show sustainability and circular economy principles were raised by all participants. From “The EU Green Deal 2050” to the aeronautics industry’s decarbonisation road-map or the International Olympic Committee’s call to make the sports industry more sustainable ... at JEC World, the converging efforts of all stakeholders, heading towards a sustainable future, was inspiring.

The organization of three Country on Stage to get to know the composites’ ecosystems in Italy, Belgium, and France and the attendance of official representatives from 16 countries confirmed JEC World’s importance for actors from the 4 corners of the world.

JEC World, the must-attend business platform

The whole value chain gathered in Paris for this “festival of composites” powered by a dedicated





business meetings platform developed and optimised for the composites industry, the JEC Business Meetings Program enabled 8,000+ face-to-face meetings during the three days – an increase of 13% over 2023, demonstrating the dynamism of the industry.

JEC World, where innovation meets industry

With more than 600 product launches during this year's show, JEC World remains the best place to introduce new developments to the global market. The new Live Demo zone together with more than 100 machines available on exhibitors' booths, made the JEC World experience unique.

The JEC Innovation Awards recognized 11 collaborative achievements, reflecting the industry's dedication to providing new solutions for all application sectors of composites and for its 7th edition, the JEC Startup Booster competition rewarded 3 companies from France, Denmark and the USA for their impressive market potential.

All in all, JEC World was an unmissable event to discover inspiration, celebrate the dynamism of



the industry, and shape a sustainable future! With confidence, 54% of the exhibition space has already been booked for the next edition that will take place from March 4th to 6th, 2025. Exhibitors and attendees have expressed very positive feedback about the quality of the exhibition and the success, once again, of this pinnacle event of the industry.





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www.prseventeurope.com

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www.fakuma-messe.de

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www.ipackima.com

Powtech

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www.powtech.de

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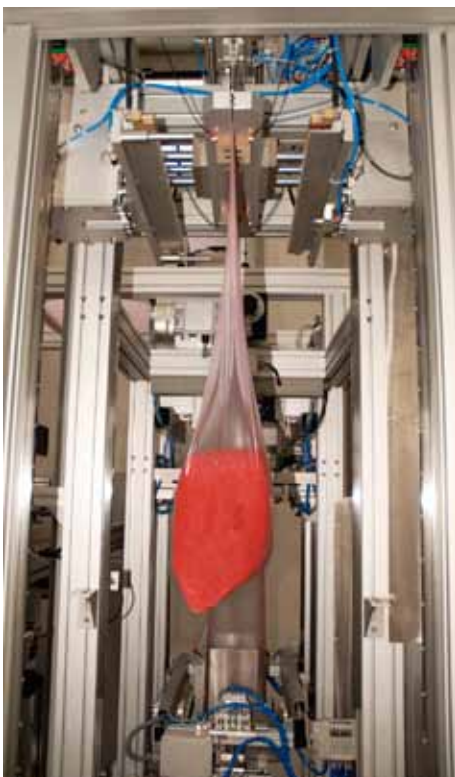


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