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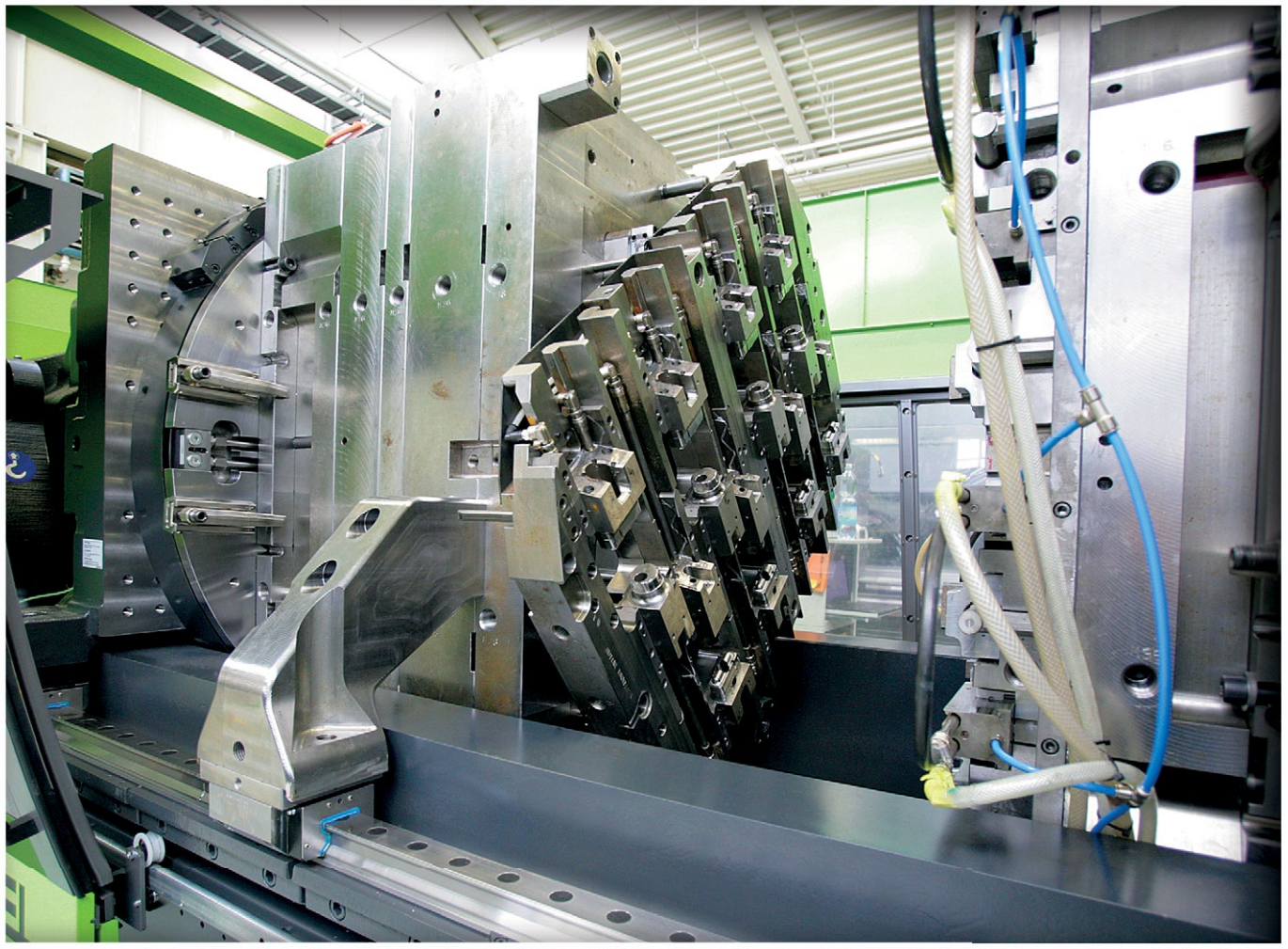
smart-molding.com



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Both, BOY XS and BOY XXS offer 50% more plasticizing volume

Up to now the maximum plasticizing volume for the machine types mentioned has been 10.2 cm³, but from the middle of this year the two injection moulding machines will have a maximum stroke volume of 15.3 cm³ as standard.

An extended screw stroke at a screw diameter of 18 mm and an injection force increased by 25 % makes this possible. Thus, the compact BOY XS (100 kN clamping force / 0.77 m² footprint) and the BOY XXS (63 kN / 0.89 m² footprint) have a significantly wider range of injection volumes in comparison to other machines in this clamping force class. These two BOY injection moulding machines do not use the piston plasticizing that is customary for this machine size, but instead rely on a screw plasticizing from 8 to 18 mm according to the "first in first out" principle. Maximum, specific injection pressures of up to 3128 bar are available.

The proven design is ideally tailored to the industrial requirements of micro injection moulding. In order to achieve a maximum conservation of resources, BOY is pushing for an almost spruesless part production with cost-effective single-cavity moulds.

The diversity of the plasticizing units allows the processing of bio-based compounds in addition to the common plastics such as thermoplastic (screw diameter 8mm to 18mm), elastomers (screw diameter 16mm) and silicone/LSR.

Dr. Boy
www.dr-boy.de

To focus entirely on hot runner business

INglass announces the sale of 100% of INEVO to Luigi Cover, owner of CST Stampi and Roberto Fagarazzi, Sales Director of the INglass mould division, since 2015.

INEVO is the new name of the INglass mould division that started as INCOS in 1987. INCOS, focused since the beginning on injection moulds manufacturing for the car lighting market and the glazing technology.

Maurizio Bazzo, President and Founder of INglass, states: "The sale of INEVO will allow Inglass to entirely focus on the HRSflow hot runner business, a market that requires continuous innovation and investments in order to satisfy the increasingly demanding needs of the injection moulding industry".

Luigi Cover, Ceo of INEVO states: "We are proud of this acquisition. INEVO has been chosen due to its deep knowledge of the lighting mould market and its high innovation skills in the production of new components for the smart mobility. At the same time the synergies with CST Stampi, both in design and manufacturing, will allow us to be a perfect partner for all the markets that require cutting-edge technology ".

The just signed company transfer represents the completion of the process of total separation between the hot runner systems HRSflow division and the lighting mold division.

Inglass
www.inglass.it

WITTMANN and FarragTech now under one roof

For more than 25 years, FarragTech GmbH has been active in plant engineering for plastics processing in the auxiliary equipment sector, with one main focus within its product range on compressed air granulate

From left to right: Erhard Fux, WITTMANN Material Handling Department Manager, Aaron Farrag, Product Manager Compressed Air Drying and Mold Cooling, Michael Wittmann, WITTMANN Managing Director.

drying. As the inventor of the compressed air granulate dryer as well as internal compressed air mold cooling for blow molding processes, FarragTech has invariably been setting benchmarks when it comes to utilizing the benefits inherent in these technologies. Another main focus of the company's product development lies on protection against condensation water for cooled molds, in which area FarragTech has created an exceptionally energy-efficient and low-cost solution.

Now the product range and the team of FarragTech are being integrated into the structures of the WITTMANN Group, thus providing them with direct access from their headquarters in Wolfurt to the entire development know-how and the international sales network of the WITTMANN Group. Further development of the FarragTech products from all three sectors will be driven forward, and it is planned to have the appliances seamlessly integrated into the open concept of WITTMANN 4.0 technology.

The company's previous owner Aaron Farrag is taking over the compressed air drying and cooling segment as Product Manager, and will incorporate this product line into the WITTMANN Group. WITTMANN's Managing Director Michael Wittmann is looking forward to the future cooperation: "We extend a very cordial welcome to the FarragTech team in our group of companies. With the small-quantity dryers from FarragTech, we are closing a gap in our product portfolio. Our international outreach – combined with the advantages of these technically outstanding products – promises an enormous growth potential for our new product segment."

WITTMANN Kunststoffgeräte
www.wittmann-group.com

New products for hot runner and control systems

Meusburger presents innovations in the field of hot runner and control systems. Under the PSG product brand, the number of versions of the smartFILL nozzle series has been expanded with a new focus. The range is perfectly complemented by the pneumatic and hydraulic operating unit for valve gate nozzles. In control systems, the combination of a VCON controller with the proRTEMP+ in one cabinet has been made possible.

The newly developed series focuses on melt guidance and ease of maintenance. With the very large variety of nozzle lengths, melt channel diameters and gate geometries, the smartFILL nozzle series is now also available in the large 4557 and the small 4019 versions. The nozzles are available in the variations smartFILL (slide seal), smartFILL Shot (screwed in) or smartFILL Shot Single (single application). They are not only suitable for processing technical and filled plastic types, but also for direct gating or gating to a cold runner. The new concept of heating right up to the injection point ensures a homogeneous temperature profile, which in turn guarantees highest component quality.

Redevelopment of operating units for valve gate nozzles

Compact redevelopment

Compatible with the smartFILL nozzle series, the pneumatic (DP 53x63) and hydraulic (MH 24x55) operating units for valve gate nozzles are new in the range. With the pneumatic operating unit, the pin is opened and closed via the clamping plate using compressed air. Even with individual actuation of each nozzle, tight inside dimensions are possible for both units. This makes these operating units particularly suitable for use in conjunction with the 19 and 27 nozzle sizes in the smartFILL series.

All options in one cabinet

Achieve optimum injection moulding results through sequential control of the melt flow. During the opening or closing of the valve pin, it is possible to control the various pin positions hydraulically in staggered modes. For cascaded filling of injection moulded parts with several injection points, visible defects on moulded parts can be avoided this way.

Meusburg
www.meus

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Front page picture: ENGEL

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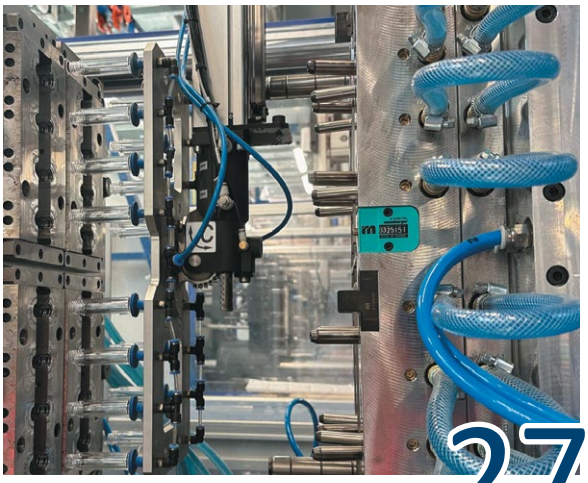
With the new Elion MED, Netstal will bring a highlight in the field of injection molding machines to K 2025 in Düsseldorf (October 8 - 15). The newly developed generation builds on proven technology and supplements it with significant optimizations to further increase production efficiency. The significantly shortened and compact design of the new machine is particularly striking. Netstal has been able to significantly reduce the length of the machine compared to its predecessor models with identical clamping force.

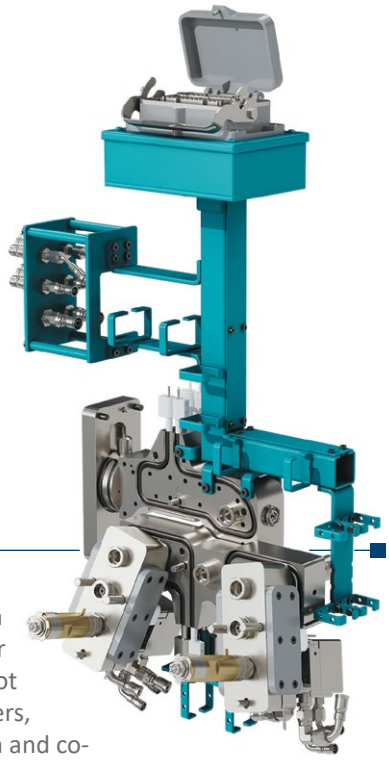
40

At automatica 2025 (June 24 to 27 in Munich, Germany), Kistler was presenting a broad product portfolio for automated manufacturing processes – or those on the way to being automated. Among other things, innovations for the manufacture of medical technology were on display. Visitors could experience newly developed solutions live – including the high-speed joining module, the new process monitoring system, as well as software tools for compliant documentation, intuitive reporting, and data-driven process optimization.



Transparency is an essential part of Bell's corporate philosophy, with the main emphasis not so much on the transparent plastic materials which take up the lion's share of the company's production, but rather on transparent communication directed towards consumers. Only particularly energy-efficient machinery and equipment are admitted to the company's injection molding floor, such as the IMMs, robots and dryers from WITTMANN.

Dr. Boy GmbH & Co. KG, a leading manufacturer of injection moulding machines, is setting a new benchmark in automation: With the new LR 5 robot, the company is presenting a solution that integrates seamlessly and completely into the injection moulding machine's tried-and-tested Procan ALPHA® 6 control system. This marks a significant step towards even greater efficiency and user-friendliness in production. The LR 5 is not just another robot; it's a full integration into the injection moulding machine's central control system.



Mold-Masters®, a leading developer and supplier of hot runners, controllers, auxiliary injection and co-injection systems, has announced a series of enhancements to its Dura®+ hot runner systems. These improvements are designed to streamline installation, reduce downtime and elevate overall system performance.

At K 2025, DOMO Chemicals, a leading supplier of high-performance polyamide materials, will demonstrate how it is boosting its drive towards a more specialized, low-carbon portfolio, setting new benchmarks in innovative and sustainable polyamides. With the theme "Building the Future Together", DOMO invites customers and industry partners to explore how collaboration, innovation, and sustainability can shape the future of performance materials. DOMO's booth will showcase its innovations across four key application pillars.

Space for sustainable innovations

At the beginning of July, WITTMANN BATTENFELD Deutschland opened its expanded and redesigned application technology center at its Nuremberg site with a customer event. With this investment, the WITTMANN Group is now offering its customers and partners in Germany even more opportunities to get to know and try out innovative products and technologies in a tangible and practical way. The thematic focus of the expanded range is on energy efficiency and the circular economy.

Sustainable, efficient, economical – at the opening of the new technical center in Nuremberg, WITTMANN is presenting itself as a reliable partner for greater competitiveness in the rapidly changing injection molding industry. "Reducing the CO^2 footprint is an absolute necessity. Measures to increase energy efficiency and sustainability only have a chance if they also pay off economically," emphasizes Andreas Schramm, Managing Director of the German subsidiary of the Austrian WITTMANN Group. "This is exactly what our developers have firmly in mind. In our new technical center, economic sustainability can be experienced directly."

WITTMANN Group opens new technology center in Nuremberg (photo: WITTMANN Group)

Exhibits covering the entire product range

The capacities in the technical center are available to all customers of the WITTMANN Group – for individual presentations, joint development work, technical application consulting, material and mold trials as well as factory acceptance tests.

Two large injection molding production cells are located in the technical center, whereby the applications presented will change frequently. A servo-hydraulic SmartPower and an all-electric EcoPower injection molding machine will be the first to produce guest gifts on the opening day. Both applications show how easy it is to exploit the potential for CO^2 savings. Among other things, the high energy efficiency of the machines, digital assistance systems and the processing of recycled materials contribute to this. The advantages of complete solutions from a single source also become clear. "With complete solutions, we can precisely coordinate all components of the production cell right from the start and thus exploit efficiency and quality potential particularly well," says Schramm. "The WITTMANN Group offers solutions from its own development and production across the entire production process – from material preparation, injection molding, temperature control and automation to inline recycling and the integration of digital solutions. Only WITTMANN can do this in this depth."

Other exhibits in the new technical center will present innovations from the areas of mold temperature control, peripherals, automation, recyclate processing and 4.0 networking. These include smart recycling packages, the Expert MouldTemp assistance system, the WX90 servo removal unit and the Feedmax Clean conveyor unit with integrated dedusting.

New information corner for partner presentations

The thematic focus of the exhibition is reflected in the lecture program. WITTMANN was able to attract renowned external speakers for the opening day. The speakers came from the companies WILDPLASTIC, Leonhard Kurz Stiftung, Kontron Leipzig and Schlaeger Kunststofftechnik.

Guests at the opening ceremony will also notice the new, attractive seating area in the technical center, which is more than just a quiet place to have a coffee with customers or move project discussions to the technical center. "We make this information corner available to our customers and partners," says Schramm. "We offer an appealing atmosphere, top equipment and state-of-the-art presentation facilities – for example for product presentations or events, whether for a day or an entire week."

WITTMANN Group
www.wittmann-group.com

Pioneering one-stop localized solutions in Indonesia

LK Group marked a significant milestone in its commitment to Indonesia's manufacturing sector with the groundbreaking of its Indonesia Technical Service Center in BSB City Industrial Park, Semarang. This state-of-the-art facility underscores LK's dedication to enhancing localized services and solidifying its long-term presence in the region.

As LK Group's first integrated facility in Indonesia, the center will combine technology showcases, training programs, warehousing, and trial mold services. Designed to address the evolving needs of local customers, the facility aims to deliver swift, tailored, and efficient support, reinforcing LK's role as a trusted partner in Indonesia's industrial growth.

Facility Highlights:

• Experience Center: Featuring interactive displays of LK's advanced die-casting machines, injection molding systems, and machining centers, alongside dedicated client reception zones.

• Customer Training: Equipped with technical training rooms, dormitories, and spaces for collaborative R&D to foster knowledge exchange.

LK Indonesia Technical Service Center breaking ground (picture: LK Group)

• Operational Excellence: A three-story office complex and single-story factory will house warehousing, trial mold services, and a parts depot to streamline local operations.

To align with Indonesia's manufacturing boom, LK has established a full-cycle support ecosystem:

• Pre-Construction: Land acquisition guidance, supply chain partnerships, and facility planning.

• Operational Phase: On-site technical teams, maintenance services, and customized training programs.

• Capacity Building: Indonesian engineers are undergoing comprehensive training at LK's China facilities, preparing them to deliver seamless technical assistance locally.

Scheduled to open in late 2025, the LK Indonesia Technical Service Center will serve as a cornerstone for collaborative innovation. By integrating cutting-edge technology with localized expertise, LK Group is poised to drive win-win partnerships and shape a resilient future for Indonesia's industrial landscape.

LK Group
www.lk.world

HASCO Portuguesa celebrates the inauguration of its new site

HASCO Portuguesa has been operating successfully in the stronghold of tool and mouldmaking in Portugal for 36 years. At the beginning of June, the pioneer of mouldmaking moved into new, modern premises at the Leiria site in order to be able to offer customers even better service locally.

The inauguration ceremony was attended by numerous customers and business partners who, together with HASCO, have played a key role in shaping the development of the Portuguese industry. The guests were impressed by the modern design of the new site.

The team, led by General Manager Nuno Gomes, supports customers on site with technical support, innovative and economical solutions and first-class service. The event gave guests the opportunity to experience the new ambience and to see the company's future-oriented approach for themselves.

A special highlight of the event was the presentation of awards to HASCO Original Reference Partners. Since 2017, HASCO Portuguesa has been recognising the loyalty of its customers who rely on original products. This year, around 40 companies were honoured for their long-standing partnership and trust in HASCO – proof of the close cooperation and shared commitment to quality.

The participants were unanimous – together they will continue to drive development in the industry in the future.

HASCO Portuguesa celebrates the inauguration of its new site (picture: HASCO)

HASCO
www.hasco.com

Powering up Indonesia: YIZUMI launches Semarang service office

On 10th June, YIZUMI held an Open Day to celebrate the grand opening of the new service office with its local partner CHESO in Semarang, Central Java, Indonesia. This milestone marked a significant expansion of YIZUMI's service network into Indonesia's industrial core, backed by a tailored product portfolio and localized service solutions to empower the upgrade of local manufacturing.

YIZUMI launches a new service office in Semarang, Indonesia (picture: YIZUMI)

Showcasing Innovation: Three Key Product Series Drive Industry Advancement

At the event, YIZUMI displayed several major new injection molding machines, including the next-gen A6 series advanced and intelligent IMM, the SPET-D series IMM for daily storage items, and the TP5 series precision energy-saving IMM. These flagship products highlight its latest technical achievements in injection molding machines and showcase its deep market insight for Indonesian customers.

A6 Series: Smart, Precise, and Sustainable

Combining intelligence, precision, green, and efficiency, it delivers better injection molding solutions for customers.

SPET-D Series: Optimized for PET Packaging

Featuring exceptional efficiency, precision, energy saving, and specialized performance, it is the favored choice for PET manufacturers.

TP5 Series: High Precision Meets Reliability

Introducing design reliability quality metrics for the first time, it excels in both quality and performance.

Expanding Service Footprint: YIZUMI Offers Faster Support

In recent years, YIZUMI had steadily deepened its presence in Indonesia, successfully establishing comprehensive sales and service networks in Tangerang and Cikarang. However, with ongoing business expansion, YIZUMI had recognized that the long travel time to Semarang from the existing service office is affecting both after-sales response efficiency and overall customer satisfaction.

As one of Indonesia's premier industrial manufacturing hubs, Semarang has excellent infrastructure and geographic advantage. It hosts a dense cluster of automotive, electronics, and plastic products manufacturers, driving strong demand for injection molding machines and related production equipment. In response, YIZUMI has established a new service office in Semarang to offer faster support and boost after-sales service efficiency for its nearby customers.

With skilled sales, engineers, and support teams, the YIZUMI Semarang Service Office provides comprehensive pre-, in-, and after-sales services. This office, which includes dedicated showroom, application testing center, and spare parts warehouse, allows customers to closely learn more about YIZUMI's products and technologies, gain hands-on operational experience, and test applications. Meanwhile, the well-stocked spare parts warehouse ensures prompt equipment repairs and maintenance for local customers, minimizing downtime and maximizing production efficiency.

Committed to Localized Excellence: Building a Comprehensive Service Ecosystem

YIZUMI is dedicated to strengthening its presence in Indonesia through localized services and a comprehensive service ecosystem. Partnering closely with CHESO, it better understands local needs and delivers fast, customized solutions.

With the opening of YIZUMI Semarang Service Office, its service radius in Indonesia will be further reduced. The office is a vital addition to YIZUMI's Indonesian nationwide service network, significantly improving its response efficiency to customer needs in the central region.

Moving forward, YIZUMI will keep investing in Indonesia, rolling out innovative products and technologies that meet the evolving demands of the local market, supporting Indonesia's manufacturers in joining the global value chain.

YIZUMI
www.yizumi.com

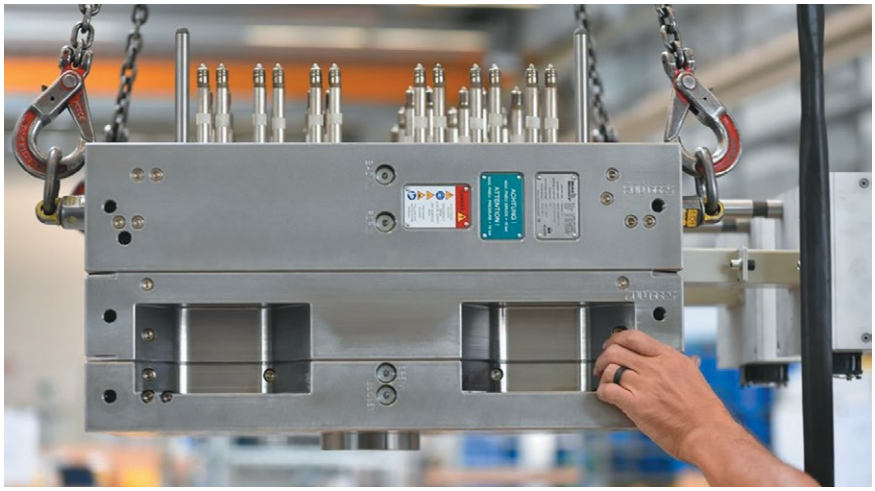
Mold-Masters® expands aftermarket support with new Southwest USA service facility

Mold-Masters®, a leading developer and supplier of hot runners, controllers, auxiliary injection, and co-injection systems, is pleased to announce the opening of a new full-service customer support center in Phoenix, AZ. This strategic expansion strengthens Mold-Masters' aftermarket capabilities across the Southwestern United States and Northern Mexico.

The Phoenix facility is fully equipped to provide comprehensive aftermarket services, including:

- Spare Parts
- Technical Support
- Service & Repairs
- System Cleanings
- Refurbishments
- Preventative Maintenance
- Training Programs

By situating the center in Phoenix, Mold-Masters can offer faster turnaround times and more convenient access for regional customers. This investment underscores the company's ongoing commitment to delivering best-in-class service and support where and when customers need it most.



Picture: Mold-Masters

"Opening a new service center in Phoenix is about getting closer to the people who matter most – our customers. As a company that offers industry-leading global service and support, we know that rapid response to reduce production downtime makes all the difference." Jim Barrett, Vice President & General Manager, Americas – Mold-Masters & DME

Mold-Masters
www.moldmasters.com

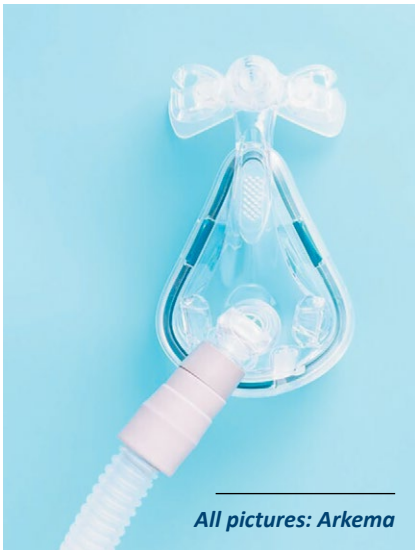
Arkema invests in a new Rilsan® clear transparent polyamide unit in Singapore

After starting up its state of the art plant in Singapore and thus increasing its global Rilsan® polyamide 11 capacity by 50%, Arkema announces the construction of a new Rilsan® Clear transparent polyamide unit on its Singapore platform. The new capacity represents an investment of around US$20 million and is expected to be operational in the first quarter of 2026.

This investment will triple Arkema's global production capacity of Rilsan® Clear transparent polyamides and will help meet the growing global demand for sustainable high-performance transparent materials in various markets, including eyewear, consumer electronics, healthcare devices, and home appliances.

Arkema is the leading producer of bio-based transparent polyamides, including its flagship grades Rilsan® Clear Rnew® G850 and G820 containing respectively 45% and 62% bio-based carbon origin. These grades provide lightweight, high transparency, flexibility and chemical resistance, while maintaining performance across a wide range of temperatures. In addition, they are fully recyclable, as part of Arkema's Virtucycle® recycling program for advanced polymers.

"We are very proud to take this new step forward with this expansion dedicated to transparent polyamides as it aligns with the evolving demand landscape, showcasing our commitment to global growth. It marks the next step in developing our strategic platform in Singapore to support our valued customers in Asia and beyond.", Laurent Tellier, Directeur Général Adjoint Polymères Haute Performance et Gaz Fluorés.



All pictures: Arkema

Arkema
www.arkema.com

Clariant advances plastics stabilizer technology with expanded production and new applications

Picture: Clariant

In a strategic move to address escalating global demand, Clariant has unveiled significant advancements in its stabilizer portfolio, combining expanded production capacity in China with innovative applications that enhance performance in artificial turf applications and medical sectors.

The expansion comes in response to surging demand for high-quality stabilizers in Asia and globally. Clariant's joint venture with Beijing Tiangang Auxiliary Co., Ltd. has successfully finished chemical commissioning of second S-EED production line at its Cangzhou facility in China. The new line will primarily manufacture Nylostab S-EED, a multi-functional stabilizer.

The upstream Chinese nylon industry's rapid expansion has been a key driver behind the increased demand for high-end additives like Nylostab S-EED. The new production capacity will enable Clariant to better serve customers in both the textile and engineering plastics industries throughout China and the broader Asian market.

"This expansion represents a strategic investment in our ability to serve the rapidly growing Asian market for high-performance stabilizers," said Mariano Suarez, Head of Marketing Additives at Clariant. "The continued success of our partnership with Tiangang demonstrates our commitment to providing new solutions that meet evolving customer needs in the region."

Nylostab S-EED has recently found significant success in a new application area: artificial turf for sports fields. The stabilizer provides exceptional protection against light, heat, and oxidation, addressing critical challenges faced by manufacturers and end-users of nylon artificial turf systems. By enhancing durability and color retention under intensive UV exposure and frequent cleaning schedules, Nylostab S-EED significantly extends the longevity of polyamide artificial turf installations.

"Artificial turf manufacturers are increasingly seeking solutions that can withstand extreme weather conditions while maintaining aesthetic appeal and performance," explained Mariano Suarez, Head of Marketing Additives at Clariant. Nylostab S-EED has been designed via molecular recognition method, showing outstanding solubility in nylon. Via strong affinity with polyamide chains, Nylostab S-EED shows strong resilience, allowing superior durability.

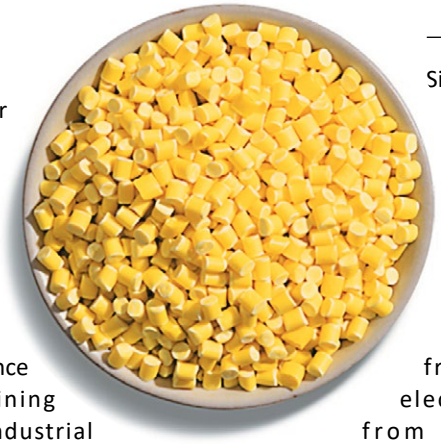
Complementing its advancements in polymer stabilization, Clariant also introduces AddWorks LXR 548, a phenol-free antioxidative solution specifically designed for polyolefin plastic applications. This innovative stabilizer effectively reduces yellowing in polyolefin parts, maintaining excellent color stability even after gamma radiation and thermal treatment.

The stabilizer's high compatibility and solubility in various polymer systems, coupled with its low extractability and low tox profile make it particularly suitable for applications with strict regulatory requirements. As demand for medical-grade plastics continues to grow globally, AddWorks LXR 548 positions Clariant to capture increased market share in this high-value segment.

Through these strategic investments and product innovations, Clariant continues to strengthen its position as a leading provider of specialty chemicals that enhance performance, sustainability, and value across the plastics industry. The company remains focused on developing solutions that address specific customer challenges while contributing to more durable and resource-efficient end products.

Clariant
www.clariant.com

Sirmax creates new Electrical & Electronics business unit



Picture: Sirmax

New resources for E&E

A new business unit is born. A strategic division dedicated to the world of electrical and electronic systems that will work alongside other divisions dedicated to key markets such as automotive and household appliances.

Thanks to its investment capacity, Sirmax has allocated resources of approximately €3 million to the Electrical & Electronics division. Driven by a drive for innovation and the enhancement of specific skills, these resources will strengthen the two main plants (San Vito al Tagliamento, Italy – Palwal, India) dedicated to the research and production of technopolymers.

The aim will be to improve organisational efficiency from a production point of view in order to better serve customers on a global scale.

The future of technology in the Electrical & Electronics market

The artificial intelligence revolution is redefining the boundaries of industrial innovation, driving companies to develop increasingly high-performance, safe and sustainable materials.

AI applications, which are becoming increasingly widespread in the civil and industrial sectors, require components that can withstand extreme conditions while ensuring reliability and safety. Sirmax compounds for the electrical and electronics sector fit perfectly into this scenario.

Already used in industrial applications – from wiring to electrical panels, from switches to components for accumulators and connectors – they stand out for their high thermal resistance and the variety of high-performance recycled grades available, starting from post-consumer waste.

Sirmax
www.sirmax.com

StackTeck capacity growth update

StackTeck Systems Ltd., a global manufacturer of high-volume injection molding solutions for thinwall packaging, closures, PET preforms, personal care and medical products, has continued to increase capacity with investments in new machinery and automation throughout their manufacturing and testing facilities totaling $14.3 million USD in the last 3 years.

Michael Gould, StackTeck's Chief Operating Officer stated: "Over the last three years we have invested an average of $4.6 million USD per year representing about 8% of our order intake. At the same time, we are finding synergies between our mold and automation lines resulting in highly integrated mold specialties such as servo driven mold functions and in-mold automation delivering highly integrated solutions to our customer base."

The investment in StackTeck's manufacturing facilities has resulted in a 13% increase in high-speed milling, 50% increase in EDM, and 50% increase in gun drilling, further enabling our ability to deliver large multi mold programs.

Vince Travaglini, StackTeck's President and CEO stated: "We are continuing to invest to handle strong demand for our products despite ongoing uncertainty with the current global trade challenges. We are happy to announce that we are currently planning an open house for this fall where we will showcase some of our latest mold and automation technologies and our customer base will be able to come and see those, as well as the investments we have made throughout our plant in the last few years."

StackTeck, with over five decades of mold building innovation, is a leading source of high productivity system solutions for the injection molding industry. StackTeck supplies a wide range of injection molds and IML automation used to produce plastic parts in applications such as caps, closures, medical, PET preforms, and thinwall packaging; as well as complete system integrations including IML. StackTeck has dedicated R&D, testing, and part sampling facilities, in addition to plastic part design, prototyping, engineering, and manufacturing capabilities. StackTeck Systems Ltd. is located 8 km north of Toronto's Pearson International Airport.

StackTeck
www.stackteck.com

Picture: StackTeck

Teknor Apex acquires Danimer Scientific to further diversify sustainable materials portfolio

Teknor Apex, a global leader in plastic material science solutions, is pleased to announce the acquisition of Danimer Scientific ("Danimer"), a leading bioplastics company focused on the development and production of biodegradable materials. This strategic move brings together two industry pioneers united by a shared vision for a more sustainable future. Headquartered in Bainbridge, Georgia, USA, Danimer operates two facilities with over 200,000 total square feet of world-class laboratories, manufacturing facilities, and testing space.

For more than a decade, Danimer's renewable and sustainable biopolymers have helped create biodegradable and compostable plastic products. Applications for its biopolymers include additives, aqueous coatings, fibers, films, hot-melt adhesives, and injection-molded articles for single-use, everyday products such as straws, cutlery, and packaging. The company holds more than 480 granted patents and pending patent applications in more than 20 countries for a range of manufacturing processes and biopolymer formulations. This milestone marks the next chapter in their journey - a future built on stability, innovation, and shared purpose. With Teknor Apex as its foundation for future growth, this brings strengthened confidence to the PHA market, and to Danimer's valued partners and stakeholders. Danimer will continue to operate as a separate, dedicated entity under their own name, team, and vision.

"Danimer's patented fermentation-based biopolymer manufacturing process enhances our product portfolio, allowing us to leverage opportunities in new markets with new end-market applications," said Don Wiseman, Chief Executive Officer at Teknor Apex. "The company's expertise in biopolymer resins, such as polyhydroxyalkanoates (PHAs) and polylactic acid (PLA), as well as its custom formulation know-how, makes it a valuable partner in our mission to advance environmentally responsible alternatives to conventional polymers."

Acquisition underscores Teknor's continued commitment to building sustainable solutions through material science innovation (picture: Teknor Apex)

"This partnership opens exciting doors to accelerate our R&D, scale our operations, and reach new customers and markets, while staying true to our core mission: replacing traditional plastics with materials the planet can embrace." Phil Van Trump, Chief Science & Technology Officer. "With the backing of Teknor Apex, we gain new resources, stability, and strategic support to grow and thrive, allowing us to continue our work to reduce plastic pollution, enable circularity, and power the next generation of sustainable products."

With this acquisition, Teknor Apex accelerates its momentum in delivering a diverse portfolio of sustainable solutions, including recycled content, bio-based materials, and climate-positive additives. This strategic move strengthens the company's mission to create verifiably circular and renewable innovations that maintain the highest standards of quality, helping customers achieve their sustainability goals and shape the future with confidence.

"Danimer is one of today's most advanced and innovative biotechnology companies," continued Wiseman. "We look forward to partnering with a team that shares our commitment to environmental stewardship and material science innovation."

Teknor Apex
www.teknorapex.com

Now the sole owner of the production entity

Aerial view Chalampé site (picture source: BASF)

BASF has finalized the purchase of DOMO Chemicals' 49% share in the Alsachimie joint venture, making the company the sole owner of the production entity for essential polyamide (PA) 6.6 precursors, including KA-oil, adipic acid, and hexamethylenediamine adipate (AH salt) in Chalampé, France.

The parties have agreed to not disclose financial details of the transaction.

With full ownership of Alsachimie, BASF strengthens its operational footprint at the Chalampé site – its European hub for PA 6.6 production. The strategic decision enhances BASF's ability to optimize backward integration into key raw materials, ensuring supply reliability and efficiency across the PA 6.6 value chain. For DOMO Chemicals, the transaction aligns with its strategy to continue to focus on delivering tailored polyamide solutions to core industries, including automotive, consumer goods, industrial, and electrical and electronics.

The transaction adds to BASF's series of recent strategic measures aimed at further strengthening its PA 6.6 production capabilities at Chalampé site, including the newly inaugurated state-of-the-art hexamethylenediamine (HMD) plant as well as the expansion of the PA 6.6 polymerization capacity at the nearby site in Freiburg, Germany.

BASF
www.basf.com

Dow sells its 50% ownership in DowAksa joint venture

Dow has recently signed a sale and purchase agreement to sell its 50% interest in DowAksa Advanced Composites Holdings BV (DowAksa) to Aksa Akrilik Kimya Sanayii A.Ş., a company of Akkök Holding. Aksa Aksa Akrilik Kimya Sanayii A.Ş., the other 50% joint venture partner, has agreed to acquire Dow's 50% interest. Dow's proceeds from the sale are expected to be $125 million, which reflects, after accounting for debt, an enterprise value of approximately 10x the estimated 2025 operating EBITDA.

Dow's decision to exit the joint venture, which was formed in 2012, is consistent with Dow's best-owner mindset strategy of focusing on its core, high-value downstream businesses. The proceeds from the transaction will be used to support the Company's balanced capital allocation approach.

The sale is expected to close in the third quarter of 2025, subject to customary regulatory approvals and other closing conditions.

Dow
https://corporate.dow.com/en-us.html

LANXESS completes sale of its Urethane Systems business to UBE Corporation

Picture: LANXESS

Specialty chemicals company LANXESS has completed the sale of its Urethane Systems business to Japanese UBE Corporation on April 1, 2025. UBE is a global manufacturer of chemical products and listed at the Tokyo Stock Exchange.

All relevant antitrust authorities had granted the necessary approvals for the transaction, which was announced in October 2024. With completion of this transaction, LANXESS has received gross cash proceeds of approximately €500 million. The enterprise value amounts to €460 million.

LANXESS intends to use the proceeds to redeem its €500 million benchmark bond which matures in May 2025. The leverage ratio (net financial debt / EBITDA pre) will be reduced to ~3x.

"With this sale, we conclude our portfolio transformation and at the same time achieve a substantial further reduction of net financial debt", says Matthias Zachert, Chairman of the Board of Management of LANXESS AG.

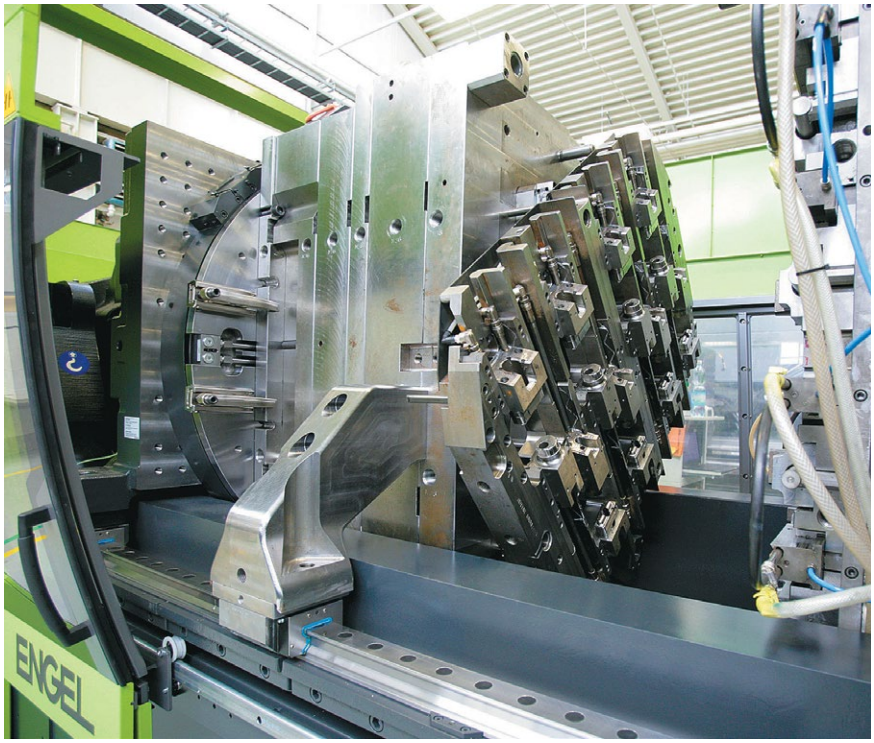
LANXESS
www.lanxess.com

35 years of ENGEL tie-bar-less technology

When ENGEL first unveiled a tie-bar-less injection moulding machine at the K trade fair in Düsseldorf in 1989, the reaction was mixed: technical fascination on one hand, open scepticism on the other. At that time, few would have predicted that this "revolutionary" design would evolve into one of the most successful technologies in injection moulding machinery. Today, 35 years later, ENGEL looks back on more than 85,000 tie-bar-less machines delivered worldwide – and continues to drive this innovation forward with a consistent focus on customer needs. At this year's K 2025, ENGEL is presenting a world première: a new electric tie-bar-less IMM.

The impetus for developing a tie-bar-less machine came from practical experience: A customer told ENGEL how much the four tie-bars interfered with mould set-up and how much easier mould changes would be without them in the way. The development department at ENGEL picked up on this idea and examined whether it would be possible to design the clamping unit of an injection moulding machine entirely without tie-bars. A simple idea – yet a major leap in design. Up until that point, it was regarded as an unshakeable principle in mechanical engineering that an injection moulding machine had to have four tie-bars, regardless of size or application. The tie-bar-less clamping unit marked a radical new beginning in engineering.

The breakthrough was achieved with a novel joint principle that compensates for the asymmetry of force application in the C-frame. Instead of guiding the platen over tie-bars as previously done, the mould is clamped via a solid frame – with a freely movable bending-bar joint between the moving platen and the clamping piston. This Flex-Link element, now patented and further developed under the name Force Divider, ensures that the mould halves remain absolutely parallel. It also provides for an even distribution of clamping force across all cavities of the platen and thus over the entire mould surface. This marked the



Picture: ENGEL

birth of a new generation of machines that not only impressed technically but also opened up new freedoms in mould design. The first complete series went into production in 1990 – the name victory became the official product name in 2000.

What began with a lever pin in the prototype has been systematically developed over several generations. ENGEL has continuously refined the joint system of its tie-bar-less machines, evolving from manually lubricated slide bearings to today's Flex-Link with decentralised force application. At the same time, the machine series has been progressively expanded and enhanced with new drive technologies.

ENGEL's continued unique position in the field of tie-bar-less technology is not only due to its early lead in technology. The company has also secured its position through continuous development and comprehensive patent protection. It became clear early on that the benefits go far beyond simplified mould changes. Especially for high-cavity moulds with a small projected area, the tie-bar-less design allows for the use of smaller machines with significantly lower energy consumption and reduced investment costs.

A milestone in the development was the introduction of the ecodrive servo-hydraulic drive technology, which reduces the energy consumption of hydraulic machines to the level of all-electric ones. In combination with the tie-bar-less clamping unit, this results in an ideal solution for demanding applications with high requirements for energy efficiency. Today, ENGEL equips all hydraulic and hybrid injection moulding machines with ecodrive as standard.

The fact that the tie-bar-less machine technology remains as relevant today as it was 35 years ago is evident above all in its adaptability. Whether for cleanroom applications, multi-component technology, or highly automated production cells – ENGEL's tie-bar-less injection moulding machines can be configured in a modular and needs-based way.

ENGEL
www.engelglobal.com

Messe Düsseldorf's global plastics and rubber portfolio under new umbrella brand

The plastics and rubber industry is dynamic, highly innovative and a key player when it comes to the circular economy, climate protection and digitalisation. In October 2025 over 3,200 exhibitors from throughout the world will present the world's most comprehensive ranges of forward-looking manufacturing, processing and finishing technologies at its No. 1 trade fair, K in Düsseldorf. At the latest K three years ago, the production units presented in live operation by machine manufacturers, raw material producers and processors at the Düsseldorf exhibition halls thrilled just under 178,000 trade visitors from 167 nations.

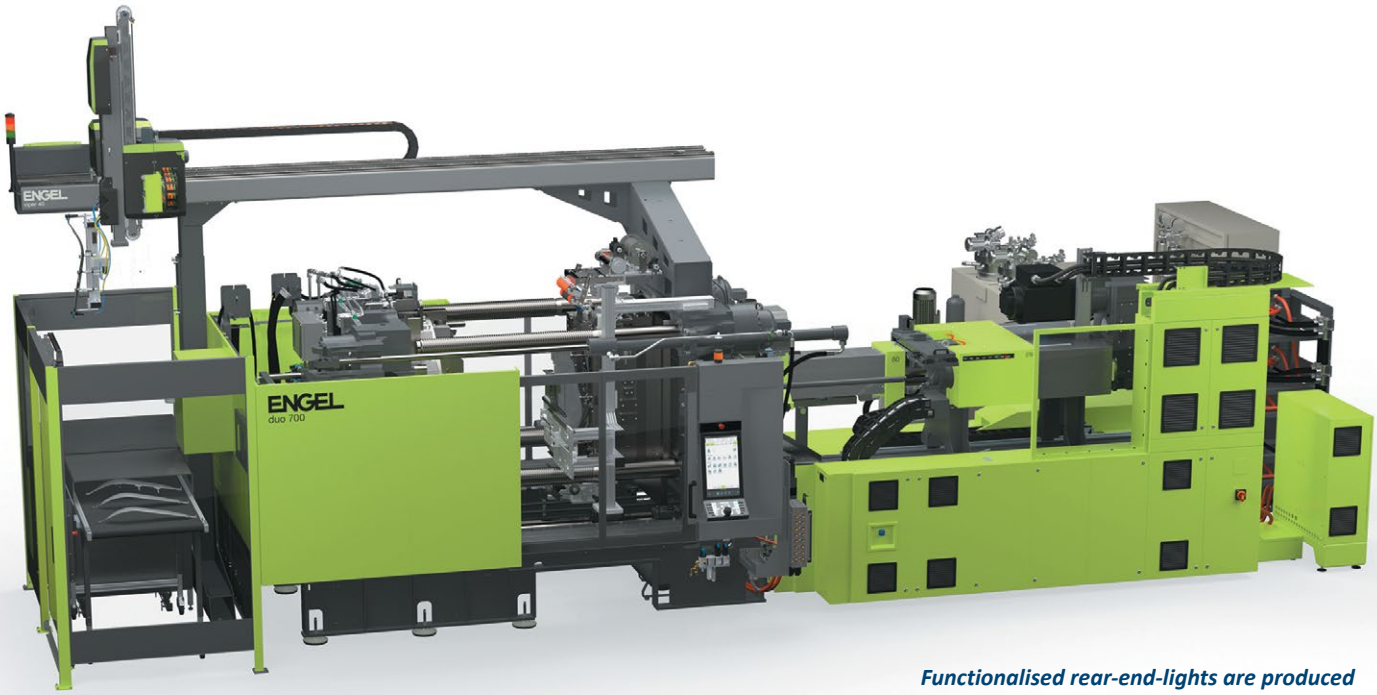
In addition to its leading trade fair serving as the innovation hub for the entire sector every three years, global players in the plastics and rubber industry require appropriate platforms for direct market entry in growth regions. So far Messe Düsseldorf had pooled its activities under the service brand Global Gate, which will now become the K-Alliance.

"The previous name especially emphasised Messe Düsseldorf's function as a door opener for entering promising sales markets," says Thomas Franken, Director of K who goes on to explain: "The designation K-Alliance now places a clearer focus on the strong partnerships and alliances that our constantly growing, worldwide network of trade fairs related to plastics and rubber stands for."

K-Alliance stands for the international strategy of Messe Düsseldorf, for our performance promise and customer-focused service. In the international exhibition business, it is key to create professional communication platforms for global players. Here, Messe Düsseldorf's portfolio ensures ideal offerings – both with K in Düsseldorf and around the globe. Our own events and strategic alliances with leading trade fairs for the plastics and rubber industry provide the sector with tailor-made opportunities.

At present, the K-Alliance comprises eleven trade fairs throughout the world. This year will still see Pack Print Plas Philippines being held from 18 to 20 September, and Plastics & Rubber Indonesia, from 19 to 22 November. Plastindia, Plastics & Rubber Vietnam, Chinaplas, plast alger (Algeria), Colombiaplast (Colombia), Plastics & Rubber Thailand and Central Asia Plast World (Kazakhstan) in 2026 as well as Arabplast (United Arab Emirates) will be held in 2027 again. The latest member of the K-Alliance is Saudi Plastics & Petrochem, which will be held from 12 to 15 April 2026 concurrently with Saudi Print & Pack in Riyadh (Saudi Arabia).

Messe Düsseldorf
www.messe-duesseldorf.de



Functionalised rear-end-lights are produced on the ENGEL duo 700 – with high precision and using clearmelt and foilmelt in a single integrated process with a compact footprint

ENGEL at K 2025: Efficiency, precision and AI – solutions for the future of plastics processing

At K 2025, ENGEL will demonstrate how technological innovation, digital intelligence and sustainability can be effectively combined. The trade fair presentation focuses on industry-specific injection moulding solutions that enable companies to manufacture more efficiently, precisely and flexibly.

ENGEL will showcase its technologies and solutions in practical operation – from the use of artificial intelligence in the running injection moulding process to highly integrated production cells for the automotive, medical, technical moulding and packaging sectors. Visitors are invited to gain a comprehensive overview of future-proof applications at ENGEL's stand in Düsseldorf – and to witness the world premiere of a new electric tie-bar-less injection moulding machine.

Automotive: Efficient mastery of function, lightweight design and new materials

Where design meets function: rear-end-light modules with clearmelt and foilmelt without hardcoating

ENGEL is demonstrating the highly integrated series production of innovative rear-end-lights on a high-performance duo 700 two-platen injection moulding machine with 7000 kN clamping force. The visible parts, measuring 600 x 240 mm, are manufactured using a combination of decorative foilmelt and functional clearmelt technologies in a vertical rotary table mould. In addition to design freedom, downstream processes are integrated into the injection moulding cell, and a separate hardcoating process is no longer required thanks to clearmelt. While the transfer the colour design from a decorative foil is applied to the component on one mould side by back-injection of thermoplastics (foilmelt), the opposite side is overflooded with polyurethane (clearmelt) to form a highly transparent and robust protective layer. A space-saving integrated automation system with a viper 40 linear robot enables short cycle times within a compact and efficient cell. The transfer foil is supplied by LEONHARD KURZ. At the partner's stand, the component is further processed using an integrated LED function foil.

With this application, ENGEL demonstrates how visible parts in the automotive sector can be both functionalised and decorated – economically, with high precision, and in a compact production process.

Overmoulding with liquid silicone: precision seals for fuel cells

A production cell with a vertical insert 150 injection moulding machine, offering 1500 kN clamping force, demonstrates the fully automated manufacturing of liquid silicone rubber (LSR) seals on

sensitive gas diffusion layers (GDL) for fuel cells. The LSR seal is applied with absolute platen parallelism directly in the machine, inspected in the mould and the component is immediately removed. The automation system, featuring ENGEL easix articulated robot and a rotary table mould supplied by ACH, ensures short cycle times and high process reliability. To save space, the control cabinet is integrated directly into the machine frame. ENGEL is showcasing a highly cost-efficient solution for fully automated overmoulding with thin LSR layers in a compact footprint.

Lightweight, strong, sustainable: bicycle handlebars with fluidmelt and organomelt

A novel bicycle handlebar is manufactured as a hollow component on a tie-bar-less ENGEL victory 180 injection moulding machine with 1800 kN clamping force. The fluidmelt process is used to create the hollow structure, while unidirectional continuous carbon fibre tapes are simultaneously integrated using the organomelt process. This innovative combination of technologies enables maximum part performance with minimal weight and a short cycle time of just one minute. The process is fully automated with an easix articulated robot. With these technologies, ENGEL once again sets new benchmarks in production efficiency and sustainability – opening up new markets for plastic components in applications traditionally dominated by metal.

Cost-efficient and ready for series production: Physically foamed B-pillar trim using MuCell

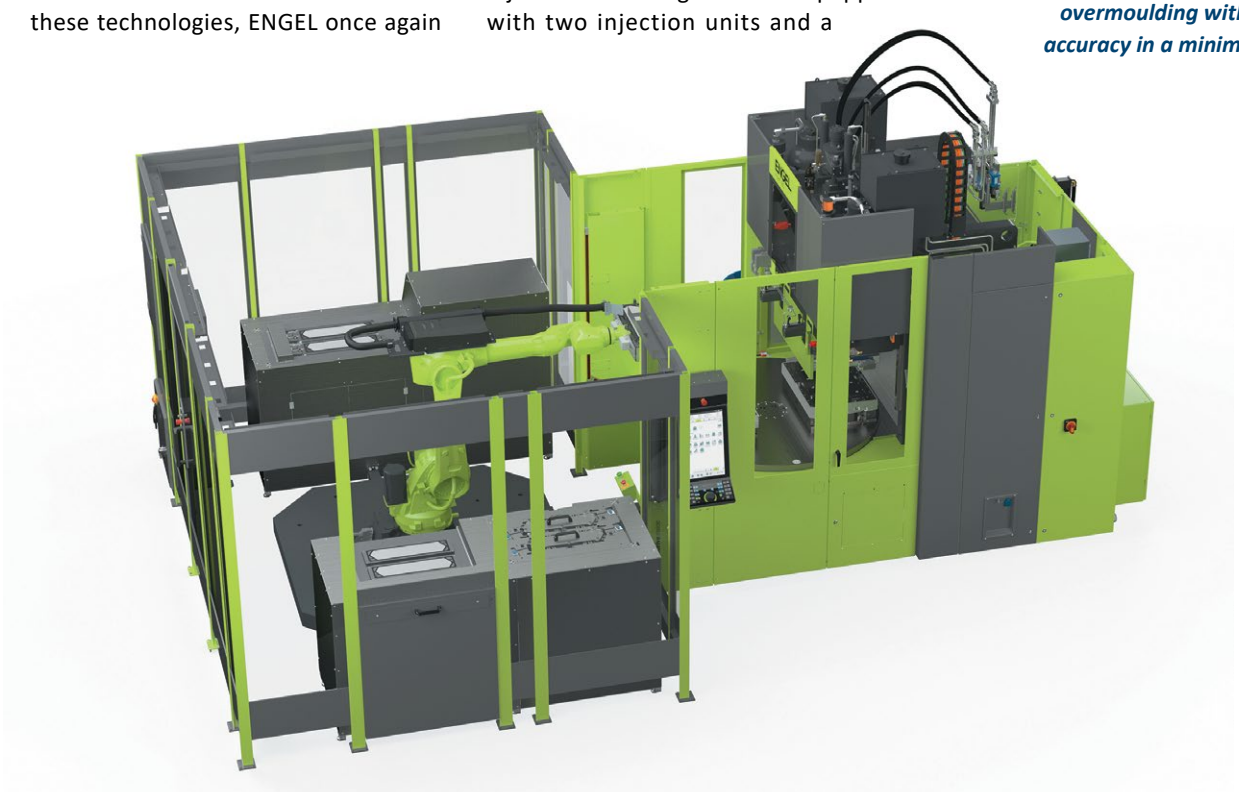
A B-pillar trim component is produced in just 50 seconds using the ENGEL foammelt technology on a t-win 6500 two-platen injection moulding machine from the WINTEC brand, part of the ENGEL Group. The foamed part, weighing 290 g, is made of mineral-filled PP from Sabic. ENGEL's foammelt technology reduces weight and cuts material and production costs while achieving excellent surface replication. Automation is handled by a highly integrated viper 20 robot. WINTEC here demonstrates a cost-effective solution for producing visible interior automotive components.

High-precision manufacturing for medical products: Cell culture plates with accelerated validation

In the Medical area, ENGEL showcases a highly efficient injection moulding cell built around an all-electric e-motion 260 combi M injection moulding machine equipped with two injection units and a central rotary platen. Using a stack mould from Hack, 24-well cell culture plates and matching polycarbonate lids are produced simultaneously in a single shot – with a cycle time of just 11 seconds. The additional injection unit is arranged at an angle to shorten the hot runner path, enable central injection without weld lines and improve material protection. This manufacturing solution, featuring a side-entry robot from Ilsemann, delivers the entire process including assembly and packaging in a compact, ergonomic setup.

A key highlight is the validation solution jointly developed by ENGEL and toolmaker Hack. This system enables structured and digital documentation of all validation phases – from Design Qualification (DQ) to Performance Qualification (PQ). Machine- and tool-integrated sensor technology, combined with products from the ENGEL iQ family and standardised documentation modules, significantly reduce the effort required. As a result, the time- and personnel-intensive validation process is substantially shortened.

Precision LSR seals for fuel cells are produced on the vertical ENGEL insert 150 – fully automated overmoulding with maximum accuracy in a minimal footprint



A high-strength bicycle handlebar is produced on the tie-bar-less ENGEL victory 180 – lightweight, automated manufacturing and continuous fibre reinforcement with fluidmelt and organomelt

Technical Moulding: Saving resources and using installation space efficiently

World premiere – New generation of electric tie-bar-less machines / Automated overmoulding of fittings

One of the highlights at the ENGEL stand is the world premiere of the latest generation of its electric tie-bar-less victory injection moulding machines. This new model is fast, clean, and energy-efficient, and also features a completely new technical design – delivering additional advantages for users.

On the new victory electric, fittings are produced with a cycle time of just 23 seconds. The mould includes large-volume core pulls, which are optimally supported by the free access provided by the tie-bar-less design. Thanks to ENGEL tie-bar-less technology, even large moulds can be used on comparatively small machines, saving space, energy and investment.

After injection moulding, the fittings are automatically equipped with seals. The production cell is equipped with two easix articulated robots to handle this step.

Blocks made from recycled material with high structural stability

On an all-electric e-mac 220 injection moulding machine with 2,200 kN clamping force, ENGEL is producing thick-walled, foamed construction blocks for the building industry. The material comes from yellow bag household waste, reprocessed by EREMA. Mould and foaming agent formulation are supplied by Moxietec. For optimum foam homogeneity, an optimised mixing screw is used during plasticising. The result: components with up to 30% weight reduction and 10% higher strength. This technology is particularly well suited for logistics pallets and as a substitute for concrete in construction applications.

As 100% post-consumer recyclate with corresponding material fluctuations is processed, the new iQ weight control plus plays a key role. After defining just two parameters, the digital assistance system automatically adjusts the switchover point and pressure curve during every injection cycle. This reduces scrap by up to 50 %.

An integrated automation solution with servo sprue picker and an integrated conveyor belt inside the machine makes the cell particularly energy-efficient and compact.

Packaging: Scalable sustainability in series production

Thin-walled cups with 30% rPET produced using a stack mould

ENGEL is demonstrating a series-ready solution for processing rPET in thin-walled packaging on an all-electric e-motion 420 injection moulding machine with 4,200 kNclamping force. What was previously only feasible using hydraulic injection, ENGEL now achieves electrically. A 6+6-cavity stack mould from Plastisud is used to produce yoghurt cups made from 70% virgin material and 30% bottle-grade rPET. The rPET is supplied by NGR and upgraded for food contact via Liquid-State Polycondensation.

This production setup delivers excellent repeatability at high performance. The combination of injection compression moulding, iQ motion control, and iQ weight control plus enables the manufacture of thin-walled, precise cups with minimal material usage. The application already complies with the requirements of the Packaging and Packaging Waste Directive for 2030. Moreover, it illustrates the potential to replace thermoforming as the preferred manufacturing process, enabling producers to save on upstream steps (film production) and material (trimming waste). ENGEL thus presents a practical example of how sustainability and precision can be combined in an economically viable production environment.

inject AI: Digital intelligence for real-world production benefits

Smart assistance systems with practical impact

With inject AI, ENGEL is taking its inject 4.0 programme to the next level. At K 2025, ENGEL will showcase the next step toward self-optimising machines by integrating artificial intelligence into many new and existing ENGEL products.

The iQ process observer monitors up to 1,000 parameters per shot, detects process deviations in real time, and provides AI-supported automatic correction suggestions – a key contribution to process optimisation and scrap reduction. The systems continuously learn from the data of all connected machines, creating added value for every new project – a genuine boost for quality and efficiency.

e-connect portalwith AI: Digital support for every shift

In the event of machine or process faults, a new AI-supported feature in the e-connect portal provides machine-specific assistance – quickly, precisely, around the clock, and in all languages. Thanks to intelligent search functionality in the ENGEL machine manuals, downtime can be significantly reduced. The system will be available as a pilot series in time for K 2025.

Humans and AI – a team effort

ENGEL does not see AI as a replacement, but as a complement to human expertise. Adaptive assistance systems ease the burden on personnel, stabilise processes and increase equipment availability – an especially valuable benefit in times of skilled labour shortages. In this way, the self-regulating machine is gradually becoming a reality.

ENGEL – Your Partner for the Future

At K 2025, ENGEL is demonstrating how machines, automation, and digital systems can be combined into fully integrated manufacturing solutions. Each exhibit on the stand represents a production cell precisely tailored to meet specific customer requirements – and a well-considered, economically viable response to those needs. The exhibits are complemented by expert corners on topics such as plastification, technologies, temperature control, and training, where ENGEL presents customer-focused solutions.

Whether lightweight construction, the use of recyclates, validation, or process stability: ENGEL thinks in terms of solutions. The trade fair appearance encourages open, hands-on and forward-looking dialogue. Because while plastics processing may not be getting any easier, with ENGEL it remains manageable, flexible, and efficient.

ENGEL is one of the world's leading manufacturers of plastics processing machinery. Today, as a single-source provider, the ENGEL Group offers a full range of technology modules for plastics processing as a single source supplier: injection moulding machines for thermoplastics and elastomers together with automation, but also individual components which are competitive and successful in the market. With ten production plants in Europe, North America and Asia (China and Korea) as well as subsidiaries and representatives in more than 85 countries, ENGEL offers its customers worldwide the optimum support which they need to compete and succeed with new technologies and leading-edge production systems. ***smi***

ENGEL
www.engelglobal.com

Lightweight and robust components made from 100% post-consumer recyclate are produced on the all-electric ENGEL e-mac 220 – with up to 50% less scrap thanks to ENGEL iQ weight control (all images: ENGEL)

The evolution of efficiency: Netstal presents the latest generation of the Elion MED at K 2025

The new generation of the successful Elion series for medical technology applications will celebrate its world premiere at K 2025 in Düsseldorf (October 8 - 15). Thanks to numerous optimizations, users can produce even more efficiently than before on a smaller footprint. Interested parties will be able to experience this live at the Netstal stand with the production of an autoinjector housing. The new all-electric Elion 1200 MED will be at the center of the high-performance system solution.

World premiere at K 2025: The new Elion MED from Netstal in the 1200 kN clamping force version (all pictures: Netstal)

With the new Elion MED, Netstal will bring a highlight in the field of injection molding machines to Düsseldorf. The newly developed generation builds on proven technology and supplements it with significant optimizations to further increase production efficiency. The significantly shortened and compact design of the new machine is particularly striking. Thanks to an optimized geometry of the toggle lever for the fastest drying cycles, a new injection gearbox with a compact metering drive, a two-part control cabinet and a modified protective cover, Netstal has been able to significantly reduce the length of the machine compared to its predecessor models with identical clamping force. The clamping unit area also offers better accessibility for maintenance work. The conversion of the entire Elion portfolio is taking place in stages. To start with, four variants with 1200 and 1750 kN clamping force are available. The target portfolio consists of further variants and will cover the clamping force range from 800 to 4200 kN.

Genuine Netstal: Fast, precise, reliable

With the new Elion MED, customers receive the leading injection precision and shot-to-shot consistency that Netstal has stood for for decades. This is achieved by high-precision sensors and the extremely high sampling rate of 2 kHz. Injection control is based on the principle of direct injection force measurement RFC (Responsive Filling Control), which is used exclusively at Netstal. The newly revised quality monitoring system also ensures seamless monitoring and assurance of production quality.

Netstal machines are designed for many years of continuous operation under high loads. This also applies to the new Elion MED. Netstal has designed the machine to be extremely robust and only uses materials and components of the highest quality from leading

specialist suppliers. The stable mold plates and the generously dimensioned guides ensure maximum precision with minimal deformation in the clamping unit. The newly designed toggle lever with a so-called double connecting rod distributes the closing force over two bearing points and has also been separated from the axis for the electric ejector. With these improvements, the new Elion MED offers users even greater reliability and availability. At the same time, it is particularly powerful compared to the competition and enables outstanding efficiency in day-to-day production. Netstal has trimmed all drive components such as motors and gearboxes for maximum performance and a broad performance profile. This means that the new Elion MED can maintain consistently high speeds at high pressure in 24-hour continuous operation for many years. To significantly increase energy efficiency compared to the predecessor model, Netstal has designed a new type of direct drive for the unit movement and the application of the nozzle contact pressure.

Maximized efficiency in the clean room

Thanks to fully encapsulated and water-cooled drive motors and the hermetically sealed control cabinet, the new Elion MED is virtually emission-free. In addition, the protective cladding has been redesigned for optimum cleanability with smooth surfaces and screws that are not visible from the outside. Despite the very compact design, the new protective housing offers full flexibility for the integration of system and peripheral components. The new Elion MED can be used in clean rooms up to class ISO 7 without any additional precautions. With additional equipment options, higher requirements can be achieved individually according to customer requirements.

To integrate the injection molding machine barrier-free into the customer's own production environment, the new Elion MED offers a wide range of OPC-UA-based interfaces, such as Euromap 77 for networking with a central control system and Euromap 82 for the various peripheral components. Thanks to HTML 5 integration, more complex system components such as automation can also be integrated into the Axos 9 machine control system as required. Depending on the application, the optional four-button Smart Operation control provides the user with a wide range of options for automating process sequences and thus further improving production efficiency.

In the standard configuration, the all-electric ELION series models can be used in cleanroom environments up to ISO class 7 and depending on the respective product requirements, numerous equipment options can achieve lower ISO classes

Exhibit with a focus on 100% manufacturing quality

For the market launch, Netstal will produce housing for autoinjectors with the new Elion MED at its stand in Hall 15 at the K 2025. The machine, which is equipped for use in clean rooms and has a clamping force of 1200 kN, uses a 4-cavity mold from Zahoransky with innovative index technology and a cycle time of 12 seconds. The modern mold features individual, servo-electrically controlled valve gate nozzles and has a rotary unit with a fully integrated servo motor. Thanks to innovative index technology, the cycle time can be significantly reduced compared to conventional mold concepts. The 6-axis robot mounted on the injection molding machine removes the finished housing parts with the mold closed. The ultra-compact automation solution from Saxe includes optical quality control and a fully production-ready solution for automatically changing the containers. The highly efficient handling system is also fully integrated into the Axos control system of the injection molding machine. Thermal parameters such as flow and return temperatures and the water flow rate in the mold are recorded and monitored in real time via the Mouldflo water distributors integrated into the mold mounting platen. Other partners involved in the exhibit are Petek (cleanroom technology), HB Therm (temperature control units), Piovan (material feed), Sabic (material), SAX Polymers (masterbatch) and bfa solutions (MES).

Maintaining value, creating value

Netstal stands for the world's leading high-performance injection molding technology. The Netstal brand goes back to its founding location of the same name in the canton of Glarus, Switzerland. The company employs over 500 people at its headquarters with production facility in Näfels and in its international subsidiaries. Netstal has been part of the Krones Group since 2024. *smi*

Netstal
www.netstal.com

Tahara to exhibit at K 2025 with advanced multilayer blow molding technology

The MBD-C33A/54E2Z-AP(C3) at the show will mold three-layer 1L bottles, using Tahara's own coex die head.

TAHARA Extrusion Blow Molding Machine

At the upcoming K 2025 show in Düsseldorf (Oct. 8-15), Tahara Machinery Ltd. of Japan, a subsidiary of the Japan Steel Works (JSW), will introduce its MBD series: all-electric double station extrusion blow molding machines with internet connectivity.

The range of product sizes for these machines is 300ml to 1.5 liters. The MBD-C33A/54E2Z-AP(C3) at the show will mold three-layer 1L bottles, using Tahara's own coex die head. The middle layer is composed of post-consumer recycled (PCR) resin.

Notably, the machine on display can mold bottles with eco-friendly materials such as PCR, polyethylene containing calcium carbonate, and bio-based resins in the middle layer. Its screw design, featuring barrier flights, a Maddock mixer, and dam flights, ensures excellent mixing and uniform dispersion of PCR materials.

Since launching the world's first all-electric blow molding machine in 1994, Tahara has built a strong track record of meeting diverse customer requirements, offering screw designs optimized for specific materials.

Layer	Inner	Middle	Outer
Resin	HDPE	PCR	HDPE + Masterbatch
Ratio	20%	60%	20%

The 1L bottles molded at the show will have a three-layer structure

Using PCR in the middle layer helps bottle molders comply with increasingly strict environmental regulations while reducing material costs. Regrind material can also be used in the middle layer, enabling waste resin reuse. Additionally, adding pigment only to the outer layer helps lower raw material costs.

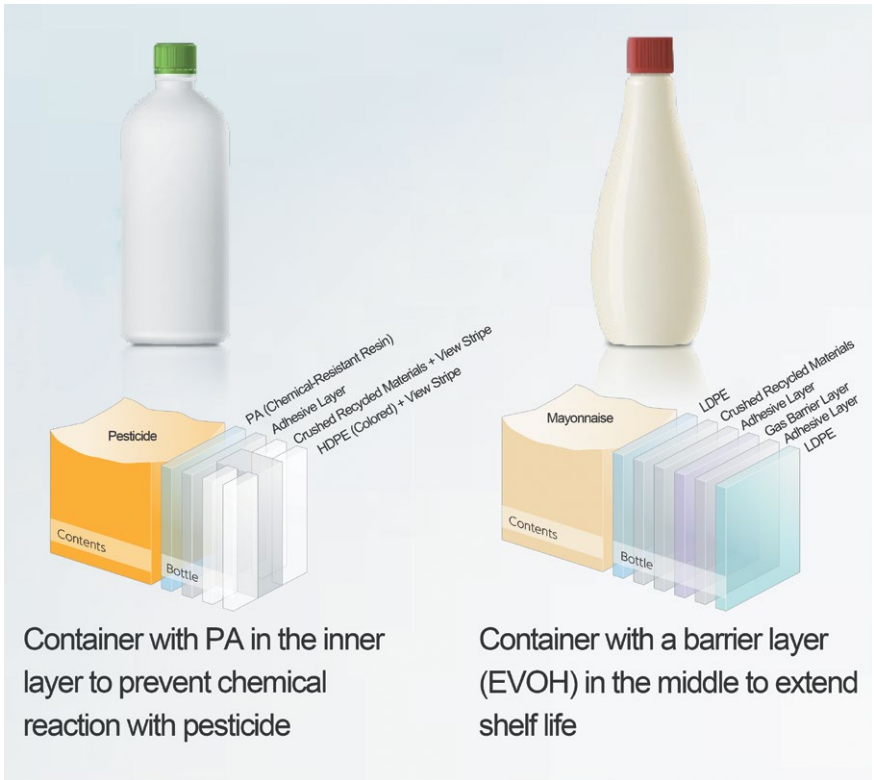
Though recycled materials can potentially affect appearance or raise concerns about contents contacting them, multilayer bottles solve these issues. Virgin resin on the inner and outer layers prevents contact between the contents and recycled or regrind layers. This avoids chemical reactions and protecting the appearance of the bottle.

At the exhibition, Tahara will also showcase co-extruded bottles used for food, cosmetic, and agrochemical containers. Six-layer food containers provide excellent oxygen barrier properties. Meanwhile, pesticide containers use PA resin for strong chemical resistance. Tahara's original coex head extrudes multilayer structures with uniform thickness in each layer, ensuring no layer disruption. Detailed layer structure materials are available on request.

All pictures: Tahara

This 3-layer, 3-head model was awarded an Environmental Award at Plastpol 2024

Tahara machines are equipped with "EWON" for remote maintenance via VPN. By allowing Tahara operators to perform initial diagnosis using the customer's machine information (logging data) and PLC data (programs and error history), the need for on-site inspections can be reduced. This enables faster on-site support by preparing necessary parts and tools in advance. In some cases, issues can be resolved entirely through remote support, cutting down both the time and cost of dispatching engineers. Moreover, accurately identifying faulty parts helps avoid unnecessary replacements.



Tahara invites visitors to come to their booth at Hall 13 / B77, located in the JSW corner. At the JSW booth, visitors will find a range of injection molding machines and twin-screw extruders on display, designed to meet the diverse needs of the customers. Technical and sales experts will also be there to discuss how Tahara's proven multilayer solutions are ready to meet the challenges of today and tomorrow. ***smi***

Tahara
www.tahara-mc.com/en/

All-electric investments reach new peak for multi-component moulder

Nestled beneath the ridges of the Ore mountains in Germany are two plants manufacturing thousands of multi-material components for OEMs daily. With an additional site recently opened in Southwestern Ontario, Canada, Hugo Stiehl Kunststofftechnik GmbH (HSK) invested in 10 injection moulding machines from the Sumitomo (SHI) Demag IntElect series. The latest installations include six advanced multi-component manufacturing cells comprising machines, peripherals and conveyors.

Bringing their total number of Sumitomo (SHI) Demag injection moulding machines to nearly 150, Hugo Stiehl Kunststofftechnik GmbH (HSK), which operates from four international sites, recently invested 2.5 million euros in multi-component moulding technology. As one of HSK's longest serving machinery partners, Sumitomo (SHI) Demag Plastics Machinery GmbH delivered ten all-electric injection moulding machines from its popular IntElect series, with clamp forces ranging between 750 and 1,800 kN (Multi).

Four of the systems have been installed at the company's German HQ in Crottendorf, with six cells placed in Brantford Ontario in Canada – tested and certified to meet the regulatory safety requirements set by the Canadian Standards Association (CSA). "These machines were specifically commissioned to support the production and assembly of battery technology components with complex geometries using our precise tooling technology," explains Ralf Schiefer, Head of Strategic Business and Product Development at HSK.

Two 2K machines IntElect Multi 180 and two IntElect 75 were installed at the Crottendorf site, with four IntElect Multi 180 and two IntElect 75 shipped to Canada. As a prominent leader in all-electric injection moulding machines, as well as multi-component and 2K technologies, Sumitomo (SHI) Demag handled the entire customisation, technology integration and cell validation process. This included installing all of the safety-relevant components, machines, peripherals and conveyor technology, reports Schiefer.

Longstanding loyalty

Having supplied over 150 machines to HSK since 1990, Sumitomo (SHI) Demag was considered to be unquestionably the most reliable collaborative partner for this latest project. "As a direct result of these successful cooperations between both companies over three decades, we were ideally positioned to respond to the exact project requirements. Our familiarity of the company also enabled us to pull forward production to meet the tight time frame specified by HSK," says sales engineer Dr. Gerald Fiedler who oversaw the entire project from start to finish.

Focusing on the value of this mutually cooperative partnership, Schiefer adds: "There are many factors that we appreciate in Sumitomo (SHI) Demag as a partner. The excellent customer support, the modular concepts of their machines which increases the longevity and flexibility of our investments, familiarity of the control system, as well as the maintenance support. Which when combined results in some of the most efficient production cycle times." For the Saxon polymer processor, nearly 80 percent of the entire fleet now carries the Sumitomo (SHI) Demag badge.

Performance-wise, Schiefer has long appreciated the responsiveness of the toggle platform on the hydraulic machines. This proven technology has now been applied to the all-electric IntElect series but now uses direct drives to achieve the most efficient yet repeatable performance required by manufacturers of safety components today.

Strongest advocates of all-electric

Eager to set the precedence for cleaner, less energy intensive production, HSK became one of the earliest adopters of all-electric technologies. "We

chose all- electric injection moulding machines at an early stage because we always had our eye on ecology," says HSK managing director Jürgen Burkert. The IntElect series quickly fulfilled the company's requirements by delivering low energy consumption, high precision, repeatability, durability and a significantly less background noise.

Now, with 50 all-electric injection moulding machines operating in the clamp force range of between 500 and 3,500 kN, HSK remains one of the most enthusiastic supporters of Sumitomo (SHI) Demag's technologically advanced know-how. In particular the company's prominent leadership in direct drive, inverter and control technologies, which for a mass manufacturer like HSK is considered to be state-of-the-art.

With a sustained history of responding to the latest trends, few companies possess the depth of processing expertise and technologies to match HSK's wealth of experience and competence in 2K injection moulding. Of the 31 2K Multi machines currently operating at HSK, over half are IntElect Multi machines. Equipped with the very latest multi-component technology, the large mould space combined with high tie bar clearance, optimises the working envelope. This provides the rotation space to accommodate a large tooling estate, while simultaneously delivering maximum precision with parallel, dynamic movements, explains Fiedler.

Greater processing precision when using the IntElect Multi's can be attributed to the company's servo motors which are designed and built by the Sumitomo Heavy Industries Group. The dosing is fully electric to ensure the highest degree of accuracy. The machine design also features a unique automatic tie-bar pull on the operating side. Additionally, the servo motor of the index drive has been integrated into the control system, explains Fielder.

Early 2K adopters

HSK purchased the first 2K injection moulding machine produced in Wiehe in 1997. It was an Ergotech Multi 50-120H/80V with the production number 7144-0001, recalls Fielder, providing additional assurance of the long-standing trust enjoyed between the two likeminded and innovative companies.

Eager to maintain the company's position at the forefront of polymer processing trends, managing director Burkert elaborates that by specialising in 2K injection moulding and IMD, and by transitioning to all-electric machines HSK continues to adapt to shifting demands. "As a full-service manufacturer with an advanced machinery fleet and over 400 highly skilled people, we continue to observe heightened demand for advanced manufacturing techniques. In particular an expansion of applications offering very specific safety functionalities for battery housings."

Similarly, Sumitomo (SHI) Demag continues to push the boundaries of innovation, particularly with regard to connectivity, interfaces and data exchange. The networked support service myConnect allows for remote support and rapid reactions to unplanned production disruptions. This variety of functionalities is especially beneficial for multi-site manufacturers like HSK, which with the opening of the Canadian plant in December 2024, as well as two plants in Crottendorf and another subsidiary in Dalovice in the Czech Republic, now operate across multiple time zones.

New machines for modern facilities

As part of the company's robust expansion strategy, HSK Canada commenced production in December 2024. Serving the US and Mexican markets, to support the processing of hundreds of thousands 2K components daily on their new IntElect machines and to help maintain the tight quality control parameters, the facility is equipped with the latest in assembly, camera and measurement technologies.

Alongside 2K injection moulding, as a technical moulder HSK is also heavily involved in highly-specialist processes. This includes in mould labelling, insert injection moulding, over moulding of textile and metal cables, and micro-injection moulding. ***smi***

Sumitomo (SHI) Demag
www.sumitomo-shi-demag.eu

An example of an all-electric injection moulding machine from the popular IntElect series, with clamp forces ranging between 750 and 1,800 kN (all pictures: Sumitomo (SHI) Demag)

FCS CT-120e all-electric IMM leads smart manufacturing and low-carbon molding trends

FCS showcased its flagship model at the inaugural Plastics, Rubber & Composite Material Fair Taiwan (PMT 2025) at ICC TAINAN, Tainan.

On June 4, 2025, the inaugural Plastics, Rubber & Composite Material Fair Taiwan (PMT 2025) grandly opened at ICC TAINAN, Tainan. The three-day exhibition (June 4–6) gathered leading enterprises from the plastics, rubber, and composites industries worldwide to showcase the latest technologies and development trends. The venue was bustling with activity, highlighting the strong momentum of the materials industry.

As a leading injection molding machine brand in Taiwan, FCS showcased its flagship model – the CT-120e All-Electric Injection Molding Machine, drawing significant attention from the industry. Designed for high-precision molding applications, the CT-120e serves a wide range of sectors including food packaging, optics, medical, and electronics, meeting stringent cleanliness and precision requirements. With an injection speed up to 300mm/sec and a repeatable injection position accuracy of 0.01mm, the machine is equipped with a closed-loop control system to enhance mold adjustment speed and accuracy, ensuring stable production unaffected by oil contamination and temperature variations.

All pictures: FCS

At the exhibition, FCS demonstrated the CT-120e with a clamping force of 120 tons, paired with a robotic arm to produce single-cavity PS cups (50g), showcasing its high efficiency and smart automation capabilities. The system was integrated with FCS's proprietary iMF 4.0 Smart Manufacturing System and peripheral monitoring platform, leveraging real-time process data to achieve production transparency, energy consumption tracking, and parameter optimization. This not only significantly improves yield and efficiency but also effectively reduces energy consumption, helping customers accelerate their transition to low-carbon manufacturing and embody the new paradigm of low-carbon injection molding and green manufacturing.

FCS Drives Industry Upgrades with the "Smart × Green × Data" Triple Transformation Strategy

Facing the global trend of digital transformation and net-zero carbon emissions in manufacturing, FCS upholds its "Smart × Green × Data" triple transformation strategy, continuously advancing smart manufacturing, green processes, and data-driven applications. The CT-120e All-Electric Injection Molding Machine epitomizes FCS's achievements in energy saving and process optimization, offering over 50% energy savings compared to traditional hydraulic machines. Its oil-free design also meets the stringent cleanliness standards required in the medical and optical industries, making it the ideal solution for next-generation precision molding.

During the exhibition, FCS organized live demonstrations and molding technology consultations by its technical team, actively promoting customized smart manufacturing solutions and engaging with domestic and international buyers, fully showcasing FCS's strength and commitment in the smart manufacturing field. *smi*

FCS
www.fcs.com.tw

Reaching sustainability goals with injection molding machines, robots and dryers from WITTMANN

Transparency is an essential part of Bell's corporate philosophy, with the main emphasis not so much on the transparent plastic materials which take up the lion's share of the company's production, but rather on transparent communication directed towards consumers. For the Polish cosmetics manufacturer's commitment to sustainability is setting high standards. Only particularly energy-efficient machinery and equipment are admitted to the company's injection molding floor, such as the injection molding machines, robots and dryers from WITTMANN.

Visitors are already impressed by the building on their way from the car park to the reception. A lot of wood built into the facade, green roofs, and large old trees surrounding the premises. Here, the strong emphasis on sustainability and responsibility catches the eye at once.

We have arrived at Bell PPHU Kosmetyki in Józefów, 20 kilometers south-east of the Polish capital Warsaw, and are now sitting in the office of Production Manager Waldemar Gula. Through the window on his right, he enjoys an unobstructed view on nature, through the opposite window he keeps an eye on the injection molding floor, which at present contains 48 injection molding machines – all of which have come from the WITTMANN Group and are equipped with linear robots from WITTMANN. An extension is planned for the next few months, since the demand for cosmetic products from Bell is increasing rapidly.

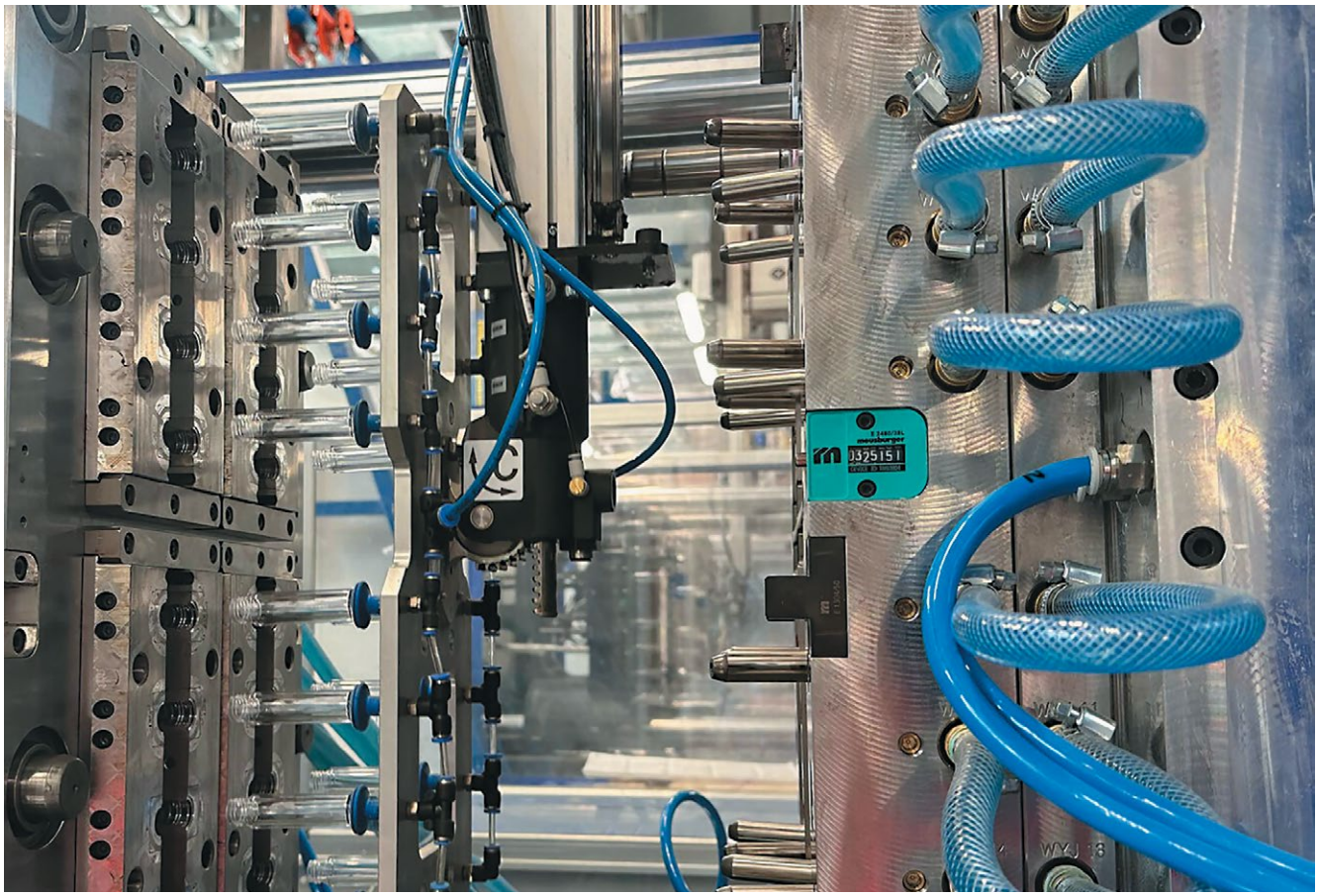
Output more than doubled with energy consumption unchanged

Everything started 35 years ago with the production of lipsticks. Now Bell covers the entire range of decorative cosmetics and delivers its products to more than 60 countries worldwide.

All primary packaging for make-up, eyeshadow, mascara etc. is produced in-house with a strong focus on sustainability. Servo-hydraulic SmartPower and all-electric EcoPower injection molding machines dominate the picture. The number one decision-making criterion for investments in new injection molding technology is energy efficiency. "With every new machine, the energy efficiency increases even further", Gula reports. "At the beginning of our efficiency boosting program, we were producing nine million parts per month. Now this has gone up to twenty million, but still our energy consumption in the injection molding shop has remained the same."

In addition to servo-hydraulic SmartPower machines, more and more all-electric EcoPower machines arrive on the production floor (all photos: WITTMANN Group)

Gula attributes this success to the consistent use of injection molding technology from the WITTMANN Group. The machines from the EcoPower series come with highly dynamic servo motors to drive the main movements. Thanks to KERS, the deceleration energy of the drives is recovered and used within the machine, for example to supply the necessary voltage to the control system, or for barrel heating. "KERS stands for Kinetic Energy Recovery System", explains Bogdan Zabrzewski, Managing Director of the WITTMANN subsidiary in Poland. "With KERS, a further reduction



Production inside a 16-cavity mold

of energy consumption by up to 5 per cent is possible."

The servo-hydraulic SmartPower machines from the WITTMANN Group also operate with KERS. In this series, the combination of fast-responding servo motors with powerful constant displacement pumps is the standard. For the injection molding process, this means maximum speed and precision of the machine's movements with simultaneous minimal energy consumption.

Specialized dryer solution for PETG

On the day of our visit, small, slender bottles produced inside a 16-cavity mold are running off the clock-out belt of an EcoPower 300 injection molding machine. Anyone unfamiliar with the material would take it for glass. In reality, it is PET. "PET looks like glass, but it does not break when it falls down", explains Gula, which is why this material is playing a more and more significant part in cosmetics packaging. Twelve years ago, Bell was the pioneer in this field. "We were the first cosmetics producer to manufacture bottles for mascara and lip gloss from PET", says Gula.

Today, primarily PETG is processed, a glycol-modified variant offering a particularly high degree of transparency and impact strength, and simultaneously excellent processing attributes. With their standardized universal screws, the SmartPower and EcoPower machines deliver first-class injection molding results. "Only the drying process presents a special challenge for this material", Gula discloses. While normal PET is dried with temperatures around 160 °C, PETG requires significantly lower temperatures between 60° and 70 °C. "So, we have specially fitted the WITTMANN Drymax dryers for our customer Bell with a cooling device", reports Bogdan Zabrzewski. In this customized solution, it was of special importance for Bell that the cooling can be switched on or off as required. For the dryers are being used flexibly for other materials, too.

"The Drymax from WITTMANN has absolutely convinced us", says Gula. "We are reaching a dew point of -67 °C with it. This has not been achieved so far by any other dryer model." Zabrzewski explains the high performance of the Drymax dryer with the use of two desiccant cartridges. "The dryers deliver process air continuously, and drying air of constant high quality." Thanks to countercurrent regeneration, the dryer also stands out by its extremely energy-efficient operation.

Machines with short delivery times

Bell's customer base is heterogeneous. In addition to long-standing customers, who place their orders well in advance and invariably for large quantities, there is a daily inflow of many short-term orders involving relatively small batch sizes. What is more, every national market sets different requirements, all of which has led to a very large number of active molds and frequent mold changes. "Elastic production" is the term used by Waldemar Gula to describe this great flexibility required from Bell every day.

Production planning is getting even more complex due to the innovation cycles becoming shorter and shorter. "Often a completely new packaging design emerges after just one year", Gula reports. Here, the in-house mold making shop helps the company to keep up with

Waldemar Gula von Bell (center) with Bogdan Zabrzewski (left) and Piotr Matusiak (right) from WITTMANN BATTENFELD Polska

the trend in a fast and flexible way. But the cosmetics manufacturer also expects this flexibility from its suppliers. "Short delivery times are vital for us", emphasizes Gula, who has occasionally purchased a WITTMANN machine from existing stocks and once bought a SmartPower 300 directly from the booth at the Fakuma.

Mono-material packaging in vogue

"We are able to fulfill all packaging wishes. Any form and any color – from transparent and matt-finished right up to high-gloss", says the Production Manager, and then adds that at present primarily high-gloss surfaces generated inside a mold are increasingly in demand. Here, sustainability is also an issue, since metalizing and chrome plating are more and more often dispensed with to protect the environment as well as the staff members. The current trend favors non-coated mono-material packaging, because it is easier to recycle.

"We bear a great ecological responsibility" emphasizes Waldemar Gula. "It is important for us to include the consumers' interests in all our decision-making". On its website, for example, Bell posts information about sustainable production and instructions for correct disposal of the packaging, so that the plastic materials will be returned to the cycle. Every piece of cosmetic packaging leaving the Bell plant in Józefów is provided with a QR code. This gives consumers very easy access to information about the packaging materials used and the correct way of disposal for recycling. "This is the only way for a circular economy to function", states Waldemar Gula, "by integrating the consumers into our network as part of the value chain."

About The WITTMANN Group

The WITTMANN Group is a globally leading manufacturer of injection molding machines, robots and auxiliary equipment for processing a great variety of plasticizable materials – both plastic and non-plastic. The group of companies has its headquarters in Vienna, Austria and consists of two main divisions: WITTMANN BATTENFELD and WITTMANN. Following the principles of environmental protection, conservation of resources and circular economy, the WITTMANN Group engages in state-of-the-art process technology for maximum energy efficiency in injection molding, and in processing standard materials and materials with a high content of recyclates and renewable raw materials. The products of the WITTMANN Group are designed for horizontal and vertical integration into a Smart Factory and can be interlinked to form an intelligent production cell.

The companies of the group jointly operate nine production plants in six countries, and the additional sales companies at their 35 different locations are present in all major industrial markets around the world. ***smi***

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Head of Strategic Marketing,
WITTMANN Group

WITTMANN Group
www.wittmann-group.com

SACMI investigates the potential of PET caps

SACMI has recently presented a comparative analysis and a new prototype of a 29 mm PET water cap, manufactured and tested on a pilot line Is it possible to produce a PET cap for beverage packaging at the current state of technological development? Should it replace HDPE (polyolefins), and under what conditions? Do the performance and functional characteristics align? But above all... Could this represent a genuine advantage in terms of total cost of ownership (TCO) and environmental sustainability?

The new 29 mm PET cap for water

In May, SACMI unveiled a 29 mm PET water cap. This standard was not selected at random — it's the most commonly used opening worldwide for this category of beverage.

The cap features segmented, hinged flaps at the base of the band for easier application; a segmented thread for simpler moulding and opening, reducing removal torque; and an ogive plug to ensure a proper seal.

Produced on a CCM press with a cycle time of 2.7 seconds, the cap is fully transparent and performs comparably to an HDPE cap at room temperature. The subsequent processing stages, such as cutting and folding, also show good stability and repeatability at the experimental level.

PET cap and HDPE cap: advantages and disadvantages

The cap is a key component of the packaging, forming the first point of contact between the consumer and the product. The cap is responsible for the sealing and, consequently, the safety and freshness of the contents.

In terms of chemical and physical properties, polyolefins have proven particularly well-suited to this type of application. All beverage caps are currently made from polyolefins — primarily HDPE — which is highly efficient from both an economic and environmental perspective. In fact, over the past two decades, the main drivers have been reducing virgin resin consumption (with a reduction of more than 50% in total weight between cap and relative opening) and energy use.

More recently, the cap2cap recycling chain has begun to emerge on some markets.

From a recycling standpoint, separating HDPE (used for caps) from PET (used for bottles) is relatively straightforward and cost-effective: by grinding the materials, HDPE floats away from PET, enabling the recovery and reuse of both materials.

In terms of production, it should be noted that PET may require a cycle time over 70% longer than HDPE, and — under the same conditions — the cap may be heavier than its polyolefin counterpart.

So, why switch to PET? This would create mono-material packaging, thereby increasing the PET yield during the recycling process. In addition, PET caps are transparent, offering a more aesthetically pleasing appearance.

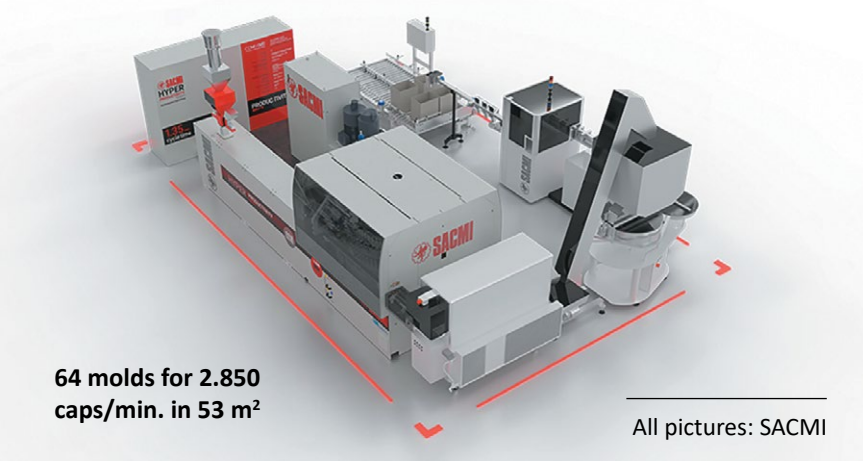
Performance, technological and process challenges

SACMI's project centres on the chemical and physical properties of PET, cap performance, and the economic and environmental impact of the same.

Compared to HDPE, PET presents some significant challenges: chief among them are its amorphous structure and hygroscopic nature, which together cause the material to deform under stress (despite PET's theoretically superior mechanical properties).

A detailed comparison of the two materials helps define the "process window", highlight relative differences, and assess cost implications.

• PET has a density approximately 40% higher than HDPE;



64 molds for 2.850 caps/min. in 53 m²

All pictures: SACMI

• The processing temperature for PET exceeds 270 °C, significantly greater than that of HDPE (<200 °C);

• PET crystallises much more slowly than HDPE, and its glass transition temperature is very close to the cap's operating temperature.

Impact on TCO and life cycle assessment

The higher melting point of PET compared to HDPE inevitably demands more energy to melt and subsequently cool the material to a demoulding temperature.

PET cap production requires a cycle time up to 70% longer than that of HDPE caps (due to higher processing temperatures, slower crystallisation, and lower thermal diffusivity), and it also requires dedicated moulds because of differing material properties (such as shrinkage and elastic modulus).

Performance is similar to that of HDPE caps, with two important considerations:

• PET is highly sensitive to elevated temperatures, which must be factored into the logistics and storage of the finished product;

• For equivalent performance, a PET cap weighs around 20% more than an HDPE cap — its theoretical strength is offset by high moisture absorption, which, according to tests, can reduce its mechanical properties by up to 60%. Efforts to reduce wall thickness (e.g. approximately 0.4 mm in HDPE caps) face technological constraints during moulding, such as mechanical tolerances, stress-induced crystallisation, etc.

Sacmi's approach included a highly detailed LCA analysis, carried out by an independent laboratory. The results of the analysis, covering 19 parameters (including climate change, resource use, water, soil, etc.) in accordance with the international standards, underscored the importance of conducting such evaluations before launching the project to confirm tangible environmental benefits.

The regulatory context must also be considered. On the one hand, the European PPWR (Packaging and Packaging Waste Regulation) promotes the adoption of mono-material, returnable, and similar packaging solutions, supporting this development in principle. On the other hand, it pushes for an overall reduction in packaging weight, a target not yet attainable with the PET alternative.

The SACMI approach

The design and development of the new PET cap comply with the international standards regarding cap performance requirements. In addition, SACMI's process avoids the use of additives and dyes that could interfere with subsequent recycling: the PET used is standard PET or rPET suitable for bottles.

With regard to cap production and application technologies, SACMI deliberately avoided introducing special capping equipment, testing the production on its own CCM (continuous compression moulding) presses. In-line cutting and folding were also adopted, along with integrated quality control.

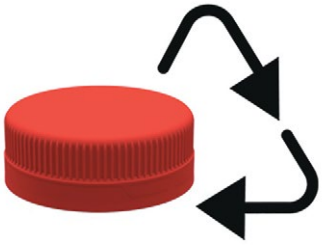
The entire process was tested on a pilot line consisting of a humidification unit, extruder, adapted compression moulding unit, cutting and folding line, and quality control using CVS systems.

Technology: the support of the SACMI Lab

Reduced cycle times and high cavitation are key market demands that SACMI has addressed with the recent launch of the new CCM64MD press. Boasting outstanding performance, the machine can produce up to 2,850 caps per minute (171,000 caps per hour) in HDPE, using just 64 moulds and a cycle time of only 1.35 seconds. This is achieved alongside a 50% reduction in footprint and a 15% reduction in specific energy consumption compared to the previous generation, at 0.43 kWh per kilogram of HDPE processed.

In this context, any potential shift from HDPE to PET would require consideration of several factors: comparable performance (especially regarding storage temperatures, transportation, etc.), higher TCO, LCA assessments tailored to specific environmental and production scenarios, etc. The SACMI Laboratory is available to support customers in developing customised early adoption solutions. *smi*

SACMI
www.sacmi.it



Servoelectric cold runner molds for LSR injection molding are learning to think for themselves

The pioneering "I" technology is based on online rheometry for continuously optimizing the process and determining the actual material viscosity in the shear rate range of relevance to injection molding.

The patent-pending SMARTshot I cold runner measurement and control concept incorporating servoelectrically actuated nozzle needles, currently under development by LSR mold specialist ELMET, is an intelligent variant of the SMARTshot E system. Once deployed in a practical setting, entirely automatic startup will be possible as will controlled family molds with cavities of differing volumes that do not require additional sensor systems. This will enable cascaded injection processes with time-delayed opening and closing movements as well as injection processes with partially open needles for simultaneously filling cavities with different volumetric flow rates per nozzle. ELMET gave an update of this new concept at LSR 2025 (took place 16 to 19 June 2025 in Irvine, California).

At its launch at Fakuma 2021, SMARTshot E was one of the first all-electric, servomotor-driven cold runner system for processing liquid silicone rubbers (LSR). The SMARTshot-I development concept is based on the same technology. However, additional rheology-based features will be able to further improve controllability of the injection molding process by using AI with self-learning functionality.

It will be possible to set up or retrofit this upgrade on any existing SMARTshot E mold. In combination with compatible injection molding machines that have a suitable interface, it will then be available to any user. SMARTshot I will be the ideal add-on to the type E in future. ELMET's range of valve gate cold runner systems also includes the pneumatic SMARTshot P and the hybrid SMARTshot PE with pneumatic needle movement and electric stroke adjustment.

Getting there faster and more reliably with self-learning

The pioneering "I" technology is based on online rheometry for continuously optimizing the process and determining the actual material viscosity in the shear rate range of relevance to injection molding. This technology uses a mathematical relationship between the volumetric flow rate of the injection molding machine, the geometric constraints of the cold runner, and the shear force at the needle to identify and quantify batch-to-batch fluctuations. This turns the cold runner into rheological measuring instrument.

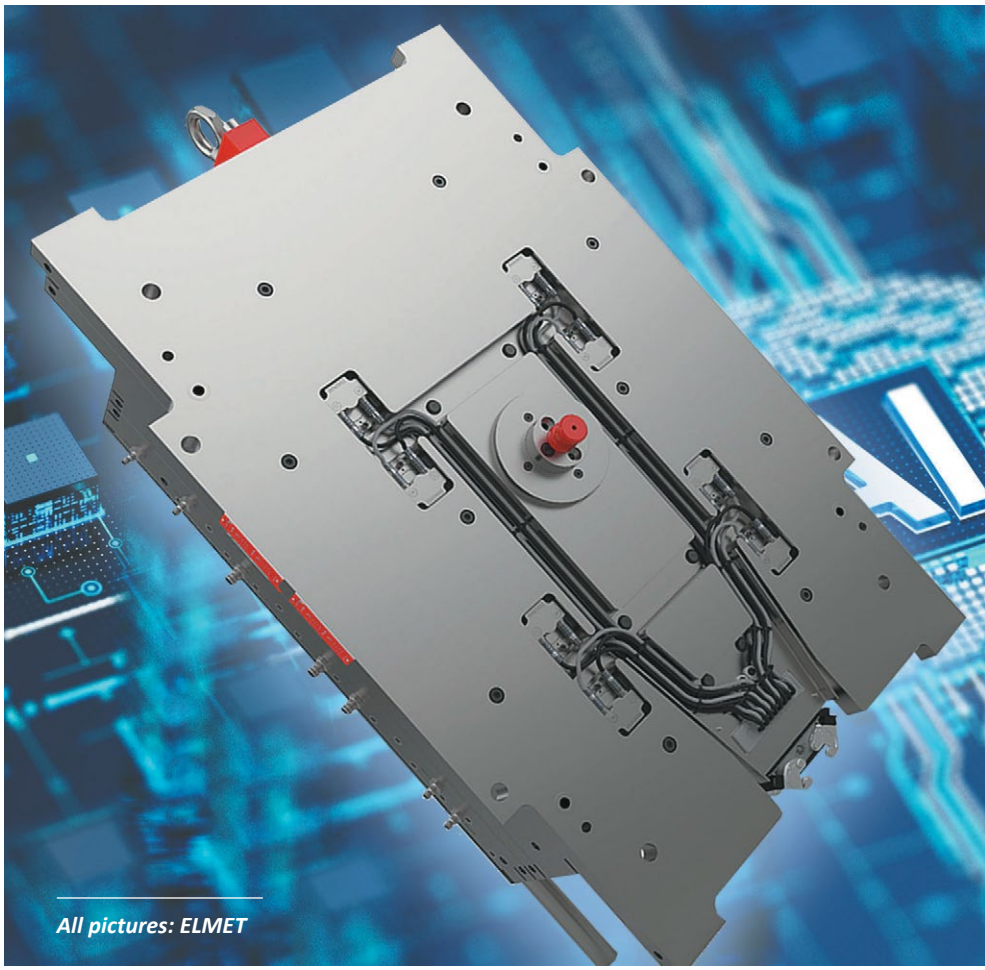
In learning mode, the system automatically detects the volume of material required to fill a cavity, so facilitating setup and optimization, especially with family molds with a number of cavities of differing sizes. Ready for integrating artificial intelligence (AI), the system is set in future to be able to support self-controlled injection molding machines if SMARTshot I control is integrated into the machine at a later date.

Micrometer-range precision

In type E and I systems, servoelectric drives perform the tasks carried out by the pneumatic pistons that were until recently used as standard. This is achieved using a highly responsive, brushless 24 V, 50 W DC motor that generates minimal waste heat and can withstand three times the rated load for short periods.

As one of the smallest and most compact drives currently on the market, it allows particularly narrow nest spacings from 44 mm. The effective stroke is 4 mm, and the system achieves an accuracy of 0.09° per revolution, so reducing the error range to ± 0.05% or ± 0.002 mm. Compared to pneumatic systems, this enables significantly faster and more precisely controllable needle movement and positioning and minimizes shot-to-shot deviations. In addition, active needle control assists with uniform cavity filling, even if the cold runner is not perfectly balanced, and with cascading the injection phase by delaying needle opening or extending injection.

One of the general advantages of the servoelectric drive is real-time control of needle position, including permanent position monitoring. The anti-twist feature of the needles means that the geometries of the needle tips can be adapted to the contour of the cavity, so minimizing marks at the injection point. Needle opening can be adjusted to an accuracy of 0.002 mm. Needle opening and closing times are of the order of hundredths of a second, and the needle movements at different injection points can be perfectly balanced.



All pictures: ELMET

Nearly ready for showtime

At its current stage of development, the control software used for SMARTshot I enables precise measurement of cold runner signals and individual and dynamic adaptation of needle stroke to each cavity's specific requirements. In tests with a 16-cavity mold, the cold runner could be fully automatically balanced within 20 shots to such an extent the components produced only exhibited minimal weight fluctuations of 1.5%. In addition, a reduction in process startup times of around 90% compared to manual adjustment by an operator would seem to be realistic. The forthcoming increase in CPU capacity will enable further improvements in this respect.

As development manager Thorsten Häuser explained, "Our aim with SMARTshot I is to significantly automate setup of the LSR injection molding process and make it more user-friendly. We are also taking the first step toward introducing artificial intelligence, firstly into the mold and later into LSR processing as a whole. This will be a considerable benefit to users by saving personnel time and financial expenditure, not only on setup and startup of new production runs but also in terms of ongoing error prevention. In future, AI will also assist with further automating and boosting the efficiency of LSR injection molding processes and will ensure we're always pushing the envelope despite any potential stumbling blocks."

About ELMET

As an internationally active, high-end full system & service supplier specializing in the processing and dosing of liquid silicone, ELMET ranks as one of the absolute experts in this field. ELMET is a global player in the production of high-quality silicone and multi-component moldings.

The company has been finding the best and most individual solutions for its customers for more than 25 years. ELMET was founded in 1996 by Kurt Manigatter, Christian Reslhuber, Karl Adlesgruber and Paul Fattinger. Within a short time, the innovative team turned the company into an internationally successful machine and moldmaker with a focus on the development and production of high-quality equipment for the fully automated production of silicone parts.

Just a few months later, ELMET applied for its first significant patent. In 1998, the company already had 16 employees before moving to its new home in Oftering in 2000. With the market launch of the ELMET dosing system with patented control system, the final breakthrough to becoming a global player in LSR dosing technology was achieved in 2003.

Today, ELMET has around 200 employees at locations in Austria, the USA, Taiwan and Japan. 95 percent of all our products are exported to customers on every continent. We are continuing to pursue this successful path. With further innovations, sustainable growth and new products. *smi*

ELMET
www.elmet.com

New Dura+ Hot runner updates

Mold-Masters® introduces Dura®+ optimization enhancements that improves overall productivity by minimizing downtime and enhancing overall performance.

Mold-Masters®, a leading developer and supplier of hot runners, controllers, auxiliary injection and co-injection systems, has announced a series of enhancements to its Dura®+ hot runner systems. These improvements are designed to streamline installation, reduce downtime and elevate overall system performance.

Mold-Masters Dura+ hot runner systems are the clear choice for automotive lens applications delivering consistent, high-quality production of automotive lens components that demand exceptional clarity. Engineered for today's most challenging resins - including PC, PC-ABS & PMMA. Dura+ systems are available with either Brazed nozzles (fixed heaters) or F-Style nozzles (field replaceable heaters). Dura+ systems are also available with our industry-leading 10-year warranty.

The Dura+ system's enhancements include:

- Installation at Room Temperature (F-Style Nozzles)
- Reduced Nozzle Bore Cut-Outs (F-Style Nozzles)
- Compound Nozzles (F-Style Nozzles)
- Compact Quick Release Actuators
- Quick Valve Pin Stroke and Height Adjustment
- Waterless Actuators featuring PACT

Installation at Room Temperature

Dura+ systems utilizing F-style nozzles that are delivered drop-in ready (pre-plumbed/pre-wired) are now engineered to be installed and uninstalled at room temperature. It can be pulled directly from the shipping box and placed into the mold. This helps to significantly reduce installation time, eliminate extra equipment such as a temperature controller and improve safety conditions during installation, assembly, and removal.

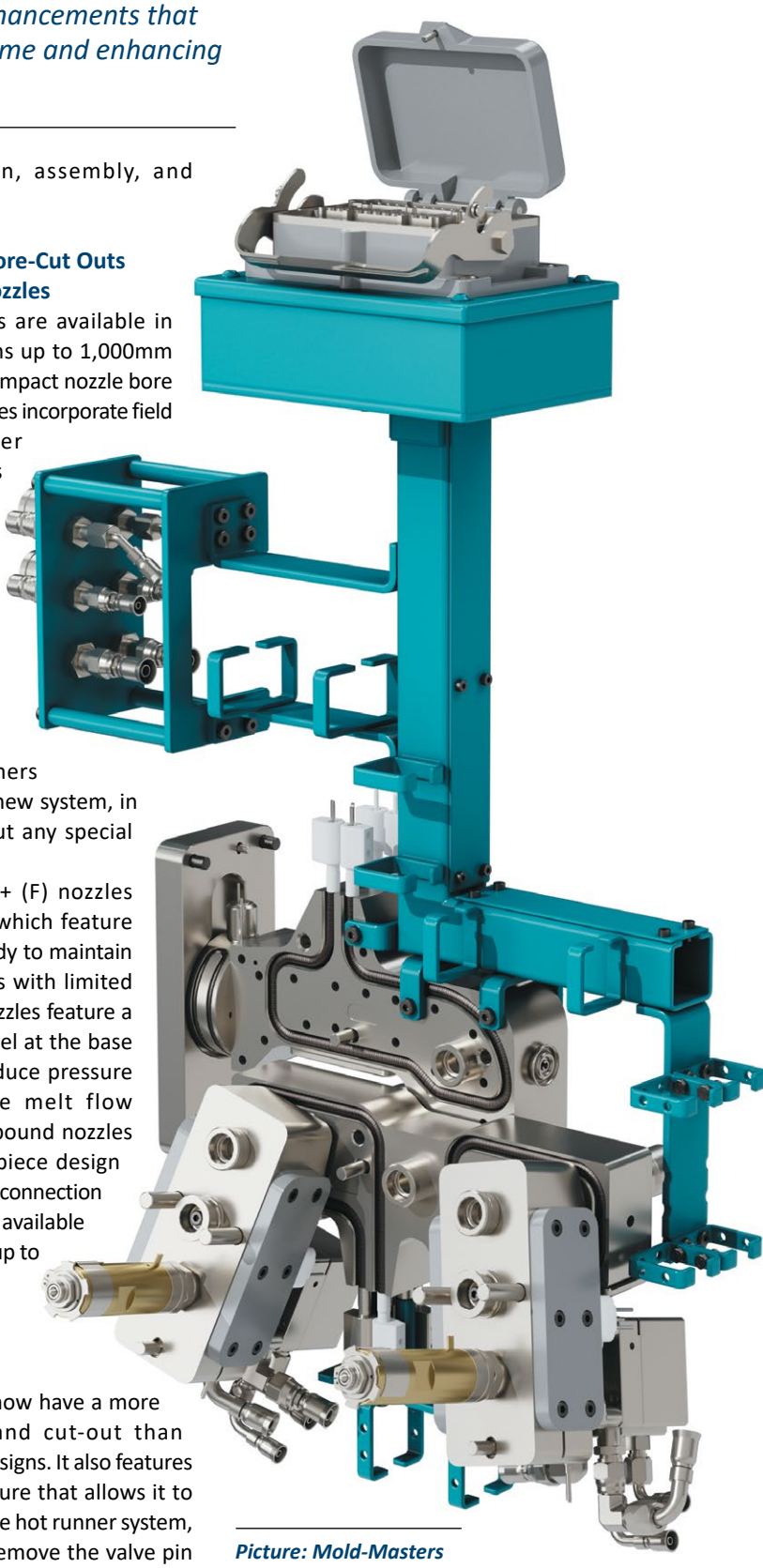
Compact Nozzle Bore-Cut Outs and Compound Nozzles

Dura+ (F) nozzles are available in customizable lengths up to 1,000mm and feature more compact nozzle bore cut-outs. These nozzles incorporate field replaceable heater bands and gate seals to ensure molders can respond and fix issues quickly on-site to minimize downtime. Most gate seals are interchangeable between the older and newer nozzle designs, so customers can convert to the new system, in many cases, without any special retooling.

Compound Dura+ (F) nozzles are also available, which feature a tapered nozzle body to maintain gate access in areas with limited clearance. These nozzles feature a larger runner channel at the base of the nozzle to reduce pressure drop and improve melt flow performance. Compound nozzles are a durable one-piece design without any split line connection in transition and are available in standard lengths up to 1,000mm.

Compact Quick Release Actuators

Dura+ actuators now have a more compact height and cut-out than previous actuator designs. It also features a quick release feature that allows it to be detached from the hot runner system, without having to remove the valve pin



Picture: Mold-Masters

with it, to make servicing the actuator much quicker and easier.

For comparison, hot runner system designs that need to pull the valve pin to remove the actuator require that the system be heated to release the valve pin from the cold resin which takes extra time to complete. In addition, on systems incorporating long valve pin lengths, it would be necessary for hydraulic lines to be fully disconnected which adds to service times and risks creating a mess from leaks when having to disconnect the hydraulic lines. This extra complexity and hassle are eliminated with the new quick release design.

Quick Valve Pin Stroke and Height Adjustment

In addition to offering more compact actuator dimensions, all units now offer quick and easy adjustment of valve pin height and stroke as standard. The valve pin height can be adjusted without the need to remove the actuator from the mold. This enhancement makes adjustments during the system installation process much quicker and easier without the need for machining.

Waterless Actuators

Waterless actuators feature an advanced design incorporating PACT (Passive Actuator Cooling Technology) which maintains operating temperature by transferring heat to the top clamp plate.

As such, they can eliminate conventional hose-plumbed cooling circuits to actuators. Benefits to the molder include faster mold changes (less components to manage, allows for simultaneous shut down of Mold Cooling and Hot Runner), provides long-term performance reliability (eliminates issues associated with clogged cooling circuits) and enhances safety when the hot runner is used at Pre-Heat stations. Valve pin height adjustment is also a standard feature.

Dura+ hot runner systems are fully compatible with the Mold-Masters advanced Servo Electric Valve Gate (SeVG+) actuation control system. SeVG+ delivers precision control over each valve pin's actuation profile – ideal for the most challenging applications.

About Mold-Masters®

Mold-Masters® is a leading global supplier of hot runners, controllers, auxiliary injection and co-injection systems. It designs, manufactures, distributes, sells and services highly engineered and customized plastic processing equipment that caters to every market. Mold-Masters is credited for patenting the first commercially viable hot runner system in 1965. Today, Mold-Masters conducts business in more than 100 countries and employs a diverse workforce that exceeds 2,150 professionals. Mold-Masters Global Headquarters is located in Georgetown, ON, Canada. Mold-Masters is an operating company of Hillenbrand (NYSE: HI). ***smi***

Mold-Masters
www.moldmasters.com

Modular, precise, forward-thinking: corvaglia presents comprehensive solution package

corvaglia's modular mold system was developed in the early years of the company and can be used for all commercially available, standardized neck finishes and thus offers maximum compatibility and future security.

With a clear focus on efficiency, design variety and regulatory compliance, corvaglia offers a fully modular portfolio for the GME 30.40 neck finish. Based on a proven, continuously evolving mold system, the extended development portfolio enables tailor-made closure solutions for a wide range of applications – from classic to tethered versions, fully compliant with the requirements of EU Directive 2019/904.

Customers benefit from a unique mix of flexibility, technological maturity and production reliability. With this, corvaglia is setting new standards in injection molding solutions for the beverage industry.

Technological background: corvaglia's modular mould system

corvaglia's modular mold system was developed in the early years of the company under the leadership of Romeo Corvaglia. The concept is based on clusters of four cavities each, which make it possible to configure molds with different numbers of clusters – such as 96 or 128 cavities – flexibly and efficiently.

A key feature is the ease of conversion between tethered and non-tethered solutions. The change is made by replacing a few components – specifically only the slides – which enables rapid adaptation to new requirements.

The mold system can be used for all commercially available, standardized neck finishes and thus offers maximum compatibility and future security.

The GME 30.40 portfolio at a glance

The corvaglia portfolio for GME 30.40 is divided into three main categories, distinguished by the design of the tamper-evidence band:

1. Classic, injected tamper-evidence band **('Interference Band')**
2. Injected tamper-evidence band with flaps **('Adaptive Flex-Band')**
3. Slitted tamper-evidence band with flaps **('Slitted & Folded Band')**


Picture: corvaglia

Both tethered and non-tethered variants are available for each of these categories. All tethered designs are compliant with EU Directive 2019/904 and are therefore future proof with regard to legal requirements.

In addition, there are three different outer shell designs to choose from to meet different ergonomic and aesthetic preferences depending on the market region and customer needs.

The free combination of these options results in 18 different design combinations that can be tailored exactly to individual market requirements.

Wide-ranging application beyond GME 30.40

The modular system is not only used for GME 30.40. corvaglia also offers comprehensive portfolios for other common neck finishes – including GME 32.04 (1881), GME 30.26 (29/25) and GME 30.25 (38mm Aseptic). The modular approach creates a high degree of investment security for bottlers and brand owner worldwide.

About corvaglia

As an innovative supplier to the beverage industry, corvaglia sets global standards when it comes to cap solutions for beverages. Over a period of more than three decades, a company group with numerous employees, three sites and a worldwide network of partners was established, which now counts renowned multinational conglomerates as some of its customers. Another of corvaglia's strengths, in addition to innovation and pioneering spirit, is our fully integrated process chain – from the creation of cap solutions to fitting them on the bottle. The foundation of this strength is our expert team, which approaches every challenge with zeal and curiosity, whether it's cap design and development, mold design and manufacturing, cap production, or providing technical support to clients when it comes to cap application. Time and again, our customers are amazed by our team's knowledge of how the products are made. ***smi***

corvaglia
www.corvaglia.com

HASCOtalks – Perspectives for mouldmaking

Germany's mouldmaking industry is navigating turbulent times and ongoing change, making it essential for companies to adapt their operations to meet evolving market demands.

HASCO tackled the pressing topic of "The Plastics Industry and the Challenges of the Future" with its live format, HASCOtalks, held in early May. A panel of prominent experts gathered at the Filderhalle in Leinfelden-Echterdingen/ Germany for a lively, thought-provoking discussion. The exchange was both controversial and constructive, offering the audience valuable insights and practical ideas for navigating the industry's ongoing challenges.

Picture: HASCO

At the start of the premiere event, the latest industry figures cast a pensive mood over the mould-manufacturing sector. According to recent research, production volumes have dropped by approximately 30% in recent years. This decline has resulted in the closure of nearly 20% of companies in the plastics industry since 2020. Supply chains have also experienced significant disruptions. Additionally, the broader structural transformation in Germany is being strongly felt within the tool and mouldmaking sector. For the panellists, these challenges served as a clear call to foster a renewed spirit of optimism.

HASCO Managing Director Christoph Ehrlich was joined on the HASCOtalks panel by Maximilian Siebenwurst of Christian Karl Siebenwurst GmbH & Co. KG, Bernd Krebs, Chairman of the Supervisory Board of Toolcraft AG, Ralf Fichtner, Project Director Aptar Pharma, and Martin Hahn, Head of Application Leonhard Kurz Stiftung & Co. KG to answer questions.

The most important finding of this round of talks was certainly that German mouldmaking continues to enjoy a very high status worldwide. Bernd Krebs, as an internationally active entrepreneur, was able to report from experience that "Made in Germany" is still a "recognised seal of quality". "We just lack self-confidence at the moment," he argued. The current figures should by no means be interpreted as a turning away from an industry rich in tradition. On the contrary, the panellists encouraged a proactive approach to the situation. Existing business models need to be re-evaluated to include innovative technologies. The panellists outlined opportunities through change. "Concentrate on your core competences," Ralf Fichtner urged the guests. Stick to the tried and tested or boldly break new ground through innovation? The key to success in answering this debated question probably lies in the right mix of both. Martin Hahn sees positive aspects in the transformation of the market "which forces us to rethink."

Keywords such as innovative strength, precision, sustainability and securing the future came up frequently. These are the characteristics that have made German mouldmaking so strong in recent decades and offer many opportunities for the future. What is needed is an even closer integration of market participants through more co-operation. VDWF President Prof. Dr.-Ing. Thomas Seul even calls cooperation a 'secret weapon' for the German tool and mouldmaking industry.

According to Martin Hahn, the structural change, which – driven by the current framework conditions – is increasing in speed, must be countered "through active changes" by market participants. "Saying goodbye to cherished habits," says Maximilian Siebenwurst, is therefore essential for him. "This includes a clear identity and strategy for the company as well as an awareness of where the own strengths lie," added HASCO CEO Christoph Ehrlich, drawing on his many years of experience

The cross-industry dialogue clearly struck a chord, offering fresh perspectives and important impetus for the future. Many attendees actively engaged in the conversation, underscoring the relevance of the topics discussed. "Performance up – demands down," remarked Bernd Krebs, succinctly capturing what he sees as the key to keeping German toolmaking competitive in the years ahead. Following the strong response, HASCO plans to establish HASCOtalks as a recurring event format. smi

HASCO
www.hasco.com

Replacing metals with 3D printed polymers

PEEK and ULTEM™ offers between 50-60% weight reduction, while maintaining high strength and high heat resistance. AON3D Hylo, a large, high temperature industrial 3D printer, was optimized to make 3D printing high performance materials like PEEK and ULTEM™ 9085 easy and accessible.

Replacing metals with polymers is not only possible but becoming increasingly more prevalent. The current generation of high-performance polymers and composites has similar mechanical properties to aluminum at a fraction of the weight. In addition, the ability to additively manufacture parts from these polymers, with high temperature 3D printers like the AON Hylo, has driven further adoption by reducing the complexity, lead times, and cost constraints of traditional manufacturing methods.

What differentiates metals and polymers?

Before we address which polymers are suitable for replacing metals, we need to set the right expectations. Some companies may inflate the capabilities of high-performance polymers and fail to consider that metals and polymers are fundamentally different. Here's how the differ:

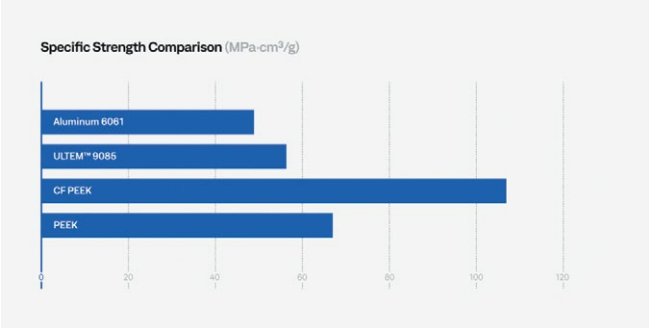
Polymers

3D printable polymers are thermoplastics, made up of polymer chains that are chemically separate from each other (no molecular bonding between chains). These chains are physically entangled which provides mechanical integrity to the overall material. The chains can also organize and fold into a crystal structure which are harder to pull apart due to greater intermolecular interaction forces. This is why semi-crystalline polymers are better in strength and stiffness compared to amorphous polymers.

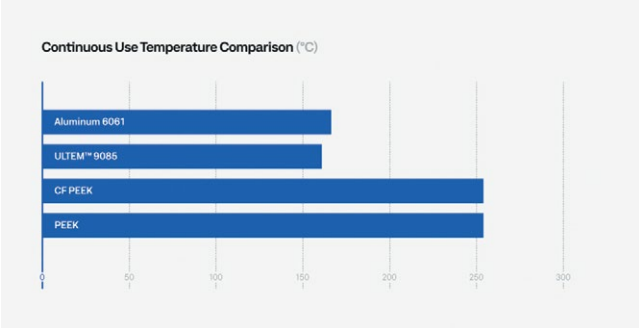
Metals

If you were to put a common metal under the microscope, you'd see a structure similar to image A below. Metals are made up of small grains, where each grain consists of a crystal lattice (image B). These crystals are made of an array of metal atoms that are connected through strong metallic bonding. The bonding and the organization of atoms into crystals is why metals are naturally strong and stiff. Often these grains differ from each other by the size and orientation both of which influence the bulk properties of the metal.

In conclusion, semi-crystalline polymers are partially made of crystals while metals



Specific strength is used to evaluate the tensile strength of a material compared to its density: The higher specific strength of thermoplastics allows for lighter weight parts while maintaining the same strength properties of metals



The continuous use temperature is based on the allowable operating temperature for each material based on given industry standards and manufacturers technical datasheets (all pictures: AON3D)

contain many crystals (grains) that differ in orientation. Since thermoplastic polymer chains are chemically separate, the attraction force is weaker than the metallic bonding between crystals in metals. As a result, metals are more resistant to elastic deformation (stiffer) and generally more temperature resistant. It's the reason why metals have been the default choice for mechanical and thermal applications. But as we engineer more advanced thermoplastics, the effective strength begins to match and, in some cases, surpass metals.

Two Suitable Metal Replacement Materials: PEEK and ULTEM™

PEEK and ULTEM™ 9085 are two of the most popular polymers that have been considered for replacing metals. The specific graph compares these materials to Aluminum 6061, an alloy used in the construction of aircraft structures, automotive parts, marine structures, and consumer products. CF PEEK contains 10% carbon fiber which increases the strength and stiffness of baseline PEEK. These are several industries where metal replacement can provide significant weight savings while maintaining the required mechanical and thermal properties. In addition, these high temperature thermoplastics demonstrate superior chemical and corrosion resistance compared to common in-service metals.

We can see that PEEK and ULTEM™ offers between 50-60% weight reduction, while maintaining high strength and high heat resistance. Replacing metals means greater fuel savings, lower carbon emissions or increased payload capabilities for the transportation industry. In addition, these materials possess high chemical resistance, high impact resistance, are UL94-V0 flammability rated, and meets FAR 25.853 flame, smoke, and toxicity (FST) requirements, a requirement in aerospace and naval applications.

An aerospace bracket, printed in Polyimide (TPI), withstands a 432 kg load before fracturing across several layers, exhibiting better interlayer weld strength and isotropy compared to ULTEM 9085

How to 3D Print PEEK and ULTEM™

Simply 3D printing high performance materials won't guarantee that the parts will possess the reported mechanical, thermal, and chemical properties. To match these properties, the selected 3D printer needs a precision-controlled high temperature build chamber (up to 260°C), 500°C extruders, and configurable print surfaces. Printing at temperatures colder than 140°C can significantly reduce part strength, chemical resistance, and require further annealing in which warping is unavoidable. AON3D Hylo is a large, high temperature industrial 3D printer optimized to make 3D printing high performance materials like PEEK and ULTEM™ 9085 easy and accessible.

About AON3D

Founded in 2015, AON3D is a venture capital-backed, Montreal-based additive manufacturing hardware, software, and material company. Its solutions drive innovation for hundreds of businesses in 25+ countries worldwide, ranging from small businesses to multinational Fortune 500 corporations. *smi*

AON3D
www.aon3d.com

Measurement technology for efficient process optimization and quality assurance in medical production

At automatica 2025 (June 24 to 27 in Munich, Germany), Kistler was presenting a broad product portfolio for automated manufacturing processes – or those on the way to being automated. Among other things, innovations for the manufacture of medical technology and pharmaceutical products were on display. Visitors could experience these newly developed solutions live – including the high-speed joining module NCFQ 2166A, the new maXYmos BL 5867C process monitoring system, as well as software tools for compliant documentation, intuitive reporting, and data-driven process optimization.

ComoNeo from Kistler is the leading process monitoring system to ensure high quality and transparency in injection molding production

Seven test automation systems of the new generation KVC 821 from Kistler form an integral part of Zinkteknik's highly automated zero-defect production of zinc casting parts in high volumes

Premiere at automatica 2025: High-speed joining module with acceleration compensation

The new NCFQ 2166A high-speed joining system was celebrating its premiere at automatica 2025. In this compact system, Kistler combines the dynamics of electromagnetic linear modules with the precision of piezoelectric measurement technology. With acceleration of up to 50 m/s², speeds of up to 5 m/s, and integrated acceleration compensation, the module is particularly suitable for highly dynamic joining applications with small forces of up to 500 N, for example in the assembly of autoinjectors. It is also used in other areas of medical technology, and in electronics and semiconductor manufacturing, where high dynamics meet maximum measurement precision. The system is accompanied by the maXYmos NC 5847B process monitoring and control system. Optional acceleration sensors in conjunction with the ICAM 5073B industrial charge amplifier enable automatic acceleration compensation for the first time. They allow sole joining forces to be determined – and thus greater process reliability and control under highly dynamic conditions.

Smart Single Stations facilitate process development

With the second generation of Smart Single Stations (SST), Kistler offers companies a turnkey solution for demanding joining and testing processes in development and manufacturing. It enables maximum precision and full traceability and can be individually tailored to the respective application, whether it is a manual workstation or a fully automated manufacturing cell. During development, the flexible tool holder and integrated configuration management enable processes to be developed and validated in advance with ease. The compact station, which was on display at automatica 2025 with an NCFH joining module (60 kN), is suitable both as a stand-alone solution and for modular lines.

Automated process monitoring with maXYmos BL 5867C

The maXYmos BL 5867C process monitoring system was also on display

at automatica 2025. It is specifically designed for reliable quality assurance in joining and pressing in the medical technology, automotive, electrical, and electronics industries. In these automated processes, maXYmos BL evaluates up to ten processes per second. The user intuitively configures the evaluation basis via the large, high-contrast touchscreen. The process monitoring system allows system integration via industrial Ethernet using common protocols EtherCAT, PROFINET, and EtherNet/IP. Via OPC-UA, maXYmos BL can also be integrated into the IIoT manufacturing environment for comprehensive parameter access. In terms of evaluation, user management, and digital interfaces, this new generation is similar to the even more powerful maXYmos TL, thereby simplifying the operation of both device classes in mixed systems.

KVC 821 for automated quality assurance at the end of the production line

The KVC 821 optical inspection system handles automated quality assurance at the end of the production line. Thanks to its eight cameras, the integrated Multicapture Device enables high-resolution inspection images of the entire surface of the workpieces without the need for mechanical rotation. The additional 2.5D and 3D measurements and the subsequent precise evaluation of the inspection images by Kistler's proprietary KiVision software reliably detect scratches, dents, and dimensional deviations. Depending on the number and scope of the inspection requirements, the system achieves cycle times of up to 800 parts per minute. Kistler also uses artificial intelligence to detect previously unknown or rare anomalies. The measured values can be imported directly into software, which evaluates and visualizes them statistically.

The KVC 821 optical inspection system from Kistler provides automated quality assurance at the end of the production line

Software solutions for process monitoring and control in plastics manufacturing

In the production of medical devices, strict tolerances for the processing must be maintained. To keep efficiency in plastics manufacturing at a high level, Kistler offers the ComoNEO process monitoring system, a solution for the continuous monitoring and control of injection molding processes. The data from the in-mold pressure measurement technology installed in the mold can also be used for process optimization. ComoNEO predict analyzes the collected process data using AI to make quality predictions for individual products and to minimize scrap. ComoNeo MULTIFLOW regulates cavity filling evenly, fully automatically, and quickly, even during process fluctuations. This reduces quality assurance costs to a minimum and avoids (pseudo) scrap as well as expensive downstream inspection costs.

AkvisIO IME (Injection Molding Edition): Analyze and evaluate process data

The AkvisIO IME (Injection Molding Edition) process data analysis software performs further comprehensive process data analysis and statistical evaluation in injection molding manufacturing. It can be connected to Kistler process monitoring and control solutions such as ComoNeo and ComoScout. The software analyzes process and machine data using classic statistical methods and artificial intelligence with a focus on quality. Communication standards such as the Ethernet-based Euromap 77 make the machine itself a data source and AkvisIO the single source of truth for reliable production data. When used in medical technology, the software thus helps to fulfill the industry's detailed documentation requirements.

The new NCFQ 2166A high-speed joining system makes its debut at automatica 2025 (all pictures: Kistler)

jBEAM software enables digital process optimization and automation

Kistler also was offering a solution for the final step in manufacturing at automatica 2025: with the help of jBEAM software solution, users can automatically generate the exact reports required in the medical technology industry. The standard-compliant report can be compiled according to specifications or standard sheets using drag & drop. Changes to the specifications can be implemented quickly and without programming knowledge.

The software also helps to automate the manufacturing processes themselves. Kistler's solution collects and filters measurement and process data from the entire shop floor, development, and testing, globally if required, and prepares it according to the requirements of different departments and users. This provides users with a basis for decision-making during process optimization and automation or for continuing ongoing automation projects. Kistler was demonstrating the versatility of the application on site, as visitors can bring their own process data. Kistler experts evaluated it at the booth and then advised on the optimization and automation potential of the analyzed process. ***smi***

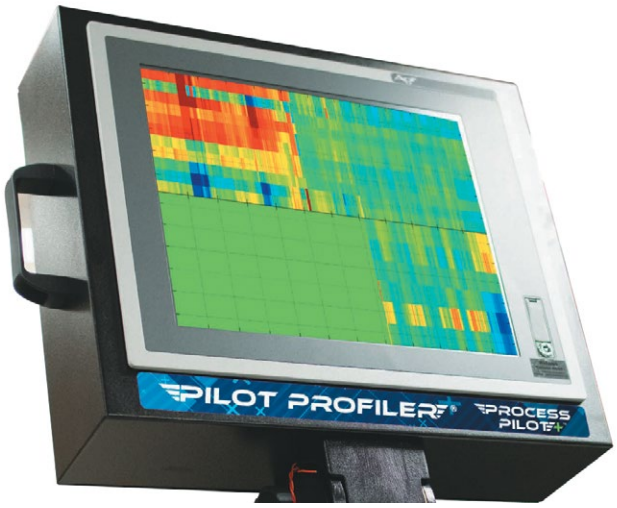
Kistler
www.kistler.com

Agr International at drinktec 2025

Laboratory automation, precision bottle measurement and innovations in automated blowmolder control will be focus for Agr International at drinktec 2025.

Agr is committed to helping the industry efficiently produce high-quality, light weight and sustainable plastic and glass packaging. At drinktec 2025, Agr will display several new product developments within its portfolio of quality management and process control equipment for beverage containers.

Processing lighter weight PET bottles using virgin material is challenging on its own. However, introducing the variability associated with rPET makes production even more difficult. Agr's blowmolder management system and vision systems, along with automated laboratory equipment, are relied on by bottle producers and brand owners around the world to overcome the many challenges associated with producing lighter bottles with increased rPET content. Updates to these systems will be demonstrated throughout the week at drinktec.



The Process Pilot+ incorporates the latest evolution in blowmolder control (all pictures: Agr)

The Gawis 4D system provides fast, accurate, non-destructive measurement of thickness and dimensional attributes

Process Pilot+™ – reflects the latest advancements in automated process control for PET bottles and will be a focal point of Agr's display. Recent updates and enhancements to Process Pilot+ incorporate further AI that significantly improves blowmolder efficiency and profitability by enabling operators to automatically optimize the blowmolder based on performance, energy efficiency or operating costs. As the Pilot Profiler® system continuously measures material distribution on every bottle, the Process Pilot+ works in conjunction with the blowmolder to proactively manage optimal material distribution. With its ability to manage the blowmolder to maintain quality and performance attributes in spite of environmental, blowmolder and, especially, material variations due to rPET that occur during the production process, the Process Pilot+ system is an essential tool for PET bottle manufacturers that are committed to incorporating rPET into their product mix.

Pilot Vision+™ – Agr's latest and most powerful in-the-blowmolder vision system. This system is uniquely positioned for the quality management of bottles with high percentages of rPET. Designed to work in conjunction with today's high-speed reheat stretch blowmolding equipment, the Pilot Vision+ system offers a modular approach to defect detection that works within

the blowmolder. The open architecture of this system allows for simultaneous management of up to six cameras, in multiple locations. As part of Agr's Process Pilot family of products, Pilot Vision+ can be combined with Process Pilot+ for a total bottle management solution, providing the ability to detect random occurring defects as well as manage the process to maintain precise material distribution, even with the lightest and/or most difficult-to-process bottle design.

The Gawis 4D is the latest and most advanced measurement system for beverages and other types of bottles. This all-in-one laboratory measurement system streamlines laboratory measurement operations by performing a multitude of critical dimensional and thickness measurements in one simple operation with unmatched accuracy, repeatability and operational throughput. Mated with a robotic handling system, the Gawis 4D can measure up to 128 bottles or preforms in one hands-free operation. The Gawis 4D features Agr's patent pending AutoJob™ that provides the ability to create complicated job setups in a matter of seconds.

Understanding that with the reduction in material and increased use of rPET that the industry is seeing, manufacturers also need to make certain that their bottles will perform during the filling process and while filled. At their drinktec booth, Agr will demonstrate to you their Plastic Pressure Tester, with the latest advancements in burst, expansion and shelf-life testing.

The PPT3000 offers high-resolution, servo-controlled pressure and volume expansion testing for plastic and related containers

The ThicknessPen provides portable, non-destructive, accurate thickness measurement of non-ferrous materials, regardless of size or shape

In addition, Agr will display its ThicknessPen® handheld thickness measurement device which offers an innovative approach to portable thickness measurement with its dual-mode design. Developed to address the multiple and diverse thickness measurement applications of the production environment, the ThicknessPen can be used anywhere, from the laboratory, the plant floor or even in a wet environment at a job site in the field.

Experts from Agr will be available to discuss these products as well as the complete line of process monitoring and quality control equipment available from Agr for the beverage industry.

Agr products are designed to assist container producers, converters and fillers stay competitive while meeting the increased quality demands of today's changing world. As an industry leader for nearly 100 years, Agr is committed to providing the beverage container industry with the most technologically advanced products available for quality control and productivity improvement. ***smi***

Agr
www.agrintl.com.

K 2025 in name of new technologies

From 8 to 15 October Moretto will take part in K 2025 in Düsseldorf to present surprising innovations including the gravimetric batch blender DGM GRAVIX 50, the dryer X COMB 19, the HYPER CUT grinder, the manual manifold with wireless control and OW6, the innovative centralised system management server.

Gravimetric batch blender DGM Gravix 50

Two years after the launch of the DGM20, the DGM GRAVIX 50 extends the range of the gravimetric batch blenders specifically designed for the micro-dosing of plastic materials. Thanks to the SMD electronic control, the digital technology increases the performance of the self-adjustment algorithms. Additionally, the weighing system performs high-speed sampling, ensuring that data are processed through self-learning functions.

A unique feature of the system is the double eyelid device, which has an unbeatable reaction time of only 25 ms, which ensures accurate dosing. The Rotopulse technology evolves for micro-dosing by means of a pulse system, down to a tenth of a gram in the dosing of masterbatch. The increased capacity of the mixer completes the configuration ensuring first-class performance. Advanced connectivity and readiness for the MOWIS supervisory system make the DGM GRAVIX blenders highly versatile and perfectly suited to the demands of modern industry.

Hyper Cut grinder (all pictures: Moretto)

The range of X COMB mini dryers is also expanding with the new XD19 model, which is suitable for processing techno polymers and productions of up to 60 kg/h. Boasting a completely innovative design, the XD19 enhances the construction, technology and performance of the X COMB series. Distinctive features remain the Honeycomb technology in 100% Zeolite with superior absorbent capacity, the exclusive OTX hopper and the Hyper Flow turbo compressors with variable flow, which guarantee a consistent process and high energy efficiency in a footprint of just 0,56 mq.

Moretto revolutionizes the concept of granulation with HYPER CUT, a high productivity grinder (up to 1.200 kg/h), ideal for grinding waste pieces, sprues and blown parts with a versatility that surprises even the most demanding professionals in the injection moulding, extrusion, blow moulding and thermoforming sectors. The flexible rotor design allows the cutting elements to be set to process any type of waste pieces, ensuring high performance in all conditions, with unrivalled results in terms of productivity, regrind quality, reduced noise impact and total absence of dust. The perfect balance of power and precision!

Moretto's plastic granule conveying solutions also feature a variety of innovations. The TLC manual manifold allows for the implementation of wireless control, guiding the operator through the correct coupling of materials and machines and providing immediate feedback on the status of connections. A distinctive element that aims to eliminate the possibility of human error, making the process safer, more precise and traceable. The touch-view control offers a simple and intuitive interface for the operator, enhancing safety in the control of the production process.

Maximum efficiency and self-calibration in conveying systems represent the primary needs of the modern plastics processing industry. These needs are satisfied by ONE WIRE 6, the only intelligent system available on the market that implement the exclusive KRONO technology. ONE WIRE 6 is equipped with artificial intelligence and doesn't need to be programmed as it is adaptive. Identifying the machine to be served, it recognises and applies conveying parameters automatically keeping the highest efficiency. Furthermore, KRUISEKONTROL is integrated as standard, thus completing the conveying system with a dynamic granule speed control tool. A system that identifies the operating parameters and performs gentle conveying.

All Moretto systems can be connected to the MOWIS supervising system, an extraordinary ally in everyday work that simplifies the management of complex system and provides an immediate overview of the plant status. ***smi***

Moretto
www.moretto.com

A new level of robot integration

BOY presents the LR 5 – fully integrated into the Procan ALPHA® 6 control system.

BOY Electric with integrated LR 5

Dr. Boy GmbH & Co. KG, a leading manufacturer of injection moulding machines, is setting a new benchmark in automation: With the new LR 5 robot, the company is presenting a solution that integrates seamlessly and completely into the injection moulding machine's tried-and-tested Procan ALPHA® 6 control system. This marks a significant step towards even greater efficiency and user-friendliness in production.

The LR 5 is not just another robot; it's a full integration into the injection moulding machine's central control system. That offers a number of decisive advantages for users:

• Complete integration into the Procan ALPHA® 6 control system: The LR 5 acts as an integral part of the injection moulding machine. This means an automatic link to the injection moulding machine's data set, a common alarm system and central event logging, which considerably simplifies fault diagnosis and rectification.

• Intuitive operation: The robot is operated via the same intuitive interface as the injection moulding machine. Users benefit from a uniform operating philosophy that shortens training times and minimises operating errors.

• Shared resources: Freely programmable inputs and outputs can be shared between the injection moulding machine and the robot, which simplifies the system architecture and offers additional flexibility.

Extensive functions for maximum flexibility

The LR 5 offers a wide range of functions that make it a versatile solution for a wide variety of automation tasks:

• Precise axis movements: Relative and absolute movements of the X, Y and Z axes enable precise positioning and flexible part removal.

• Customisable reference movements: Freely configurable reference movements, including the pneumatic axes, ensure fast and reliable system initialisation.

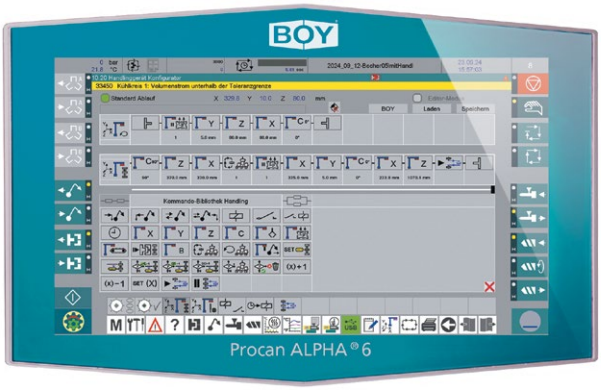
• Flexible sequences: Users can create freely configurable sequences that can be seamlessly synchronised with the ejector movement of the injection moulding machine.

• Optimum part transfer: An electronic gearbox to the ejector ensures perfect synchronisation and therefore optimum and gentle part transfer.

• Intelligent mould movement: An electronic gearbox for mould movement enables precise and efficient processes within the mould.

• Extended automation: Palletising programs and a configurable conveyor belt control with good and bad part handling round off the range of functions and enable comprehensive automation of removal and sorting processes.

With the LR 5, BOY once again underlines its innovative strength and offers its customers a state-of-the-art, integrated automation solution that increases productivity and sustainably improves efficiency in injection moulding production. ***smi***



Procan ALPHA® 6 control system (all pictures: BOY)

BOY
www.dr-boy.de

Borealis creates first comprehensive reusable cup system for a Messe Düsseldorf event

K Fair 2025, the World´s No.1 Trade Fair for Plastics and Rubber, serves as a pilot for scalable cup re-use systems for global exhibitions. It is based on ReOil® chemically recycled feedstock from OMV.

• The Messe Düsseldorf (Düsseldorf Exhibition Center) will use reusable cups at all restaurants and bars throughout K 2025, made from Borealis modified polypropylene for foam, which is produced using chemically recycled feedstock based on OMV's ReOil® technology

• This marks the first time the venue uses a comprehensive reusable cup system, representing a significant step towards reducing waste from single-use cups at large-scale events

• This pilot initiative will assess reuse and recycling rates, providing valuable insights for the effective implementation of scalable reuse systems at future events

Messe Düsseldorf is committed to reducing waste at large-scale events. At K 2025, the world´s leading international trade fair for plastics and rubber, it will introduce reusable cups for the first time, with the goal of establishing a sustainable solution that can be scaled for future events. Borealis is supporting this initiative by providing high-performance modified foamable polypropylene (PP) specifically suited to reusable and recyclable cup applications.

An additional sustainability advantage comes from the use of chemically recycled feedstock based on OMV's ReOil® technology. This initiative represents a significant step towards reducing single-use packaging at global exhibitions, aligning with the objectives of the EU's Packaging and Packaging Waste Regulation (PPWR).

"ReOil® is our proprietary chemical recycling technology that converts end-of-life plastics into circular feedstock for the production of chemicals, in particular new plastics," says Maximilian Grasserbauer, OMV Senior Vice President Circular Economy. "We operate ReOil® at our Schwechat refinery close to Vienna, Austria, and are continuously investing in advancing this technology to ensure a reliable supply of circular feedstock for the market. ReOil® is part of our sustainable base chemicals portfolio, designed to support our industry's shift toward circular feedstocks."

Beyond reusability and recycled content, the cups contribute to the circular economy in multiple ways: they are lightweight and material-efficient, have a reduced carbon footprint, and are fully recyclable.

"At Borealis, we are committed to creating innovative solutions in collaboration with our value chain partners and this initiative is a prime example," says Peter Voortmans, Borealis Vice President Marketing Consumer Products. "Reuse systems are key to making large-scale events more sustainable, and our polypropylene

solutions for foam support this by enabling lightweight, durable, and fully recyclable applications that use less material than conventional alternatives."

During K Fair, the cups will be available deposit-free at all restaurants and bars across the site. To support reuse, Messe Düsseldorf will install special collection containers. Visitors can return the cups to service points, place them in the collection containers, or take them home for personal reuse.

Logistics staff will ensure that cups left on tables or placed in the collection containers are retrieved, rinsed in on-site kitchens, and returned to service. Any cups disposed of in general waste bins will be collected after the fair and recycled by Borealis. Unused cups will be donated for further use.

Thomas Franken, K Director, Portfolio Plastics and Rubber, Messe Düsseldorf, explains the motivation behind the initiative: "Introducing reusable cups to replace single-use cups at K 2025 aligns perfectly with our motto, 'The Power of Plastics! Green – Smart – Responsible.' As the global forum shaping the future of plastics, K 2025 provides the ideal platform to highlight practical initiatives that reflect the industry's commitment to sustainability – while also supporting Messe Düsseldorf's own sustainability goals."

The initiative will serve as a pilot for assessing the effectiveness of scalable reuse systems at large events. Messe Düsseldorf will analyze usage patterns, tracking how many cups are used, re-used, and recycled. The insights gained will contribute to the development of more sustainable solutions for future events, since reducing emissions and waste from operations is a key objective of Messe Düsseldorf's sustainability strategy.

This collaboration has been further supported by additional partners who contributed to cup production and the integration of durable in-mold labels.

Arburg: Specializing in manufacturing high-end injection molding machines and turnkey systems for plastics processing.

Bockatech: EcoCore® foaming technology, used for the durable injection molded cups, reduces plastic use by up to 50%, doubles the thermal insulation, cuts manufacturing time and provides 5x the strength while ensuring recyclability.

MCC Global IML: Producing sustainable in-mold labels for rigid plastic packaging, focusing on innovation and circularity.

Miko Pac: Developing and producing innovative plastic packaging solutions for various industries, including food service.

From waste to value: This foamable polypropylene based cups are helping K 2025 go circular (all pictures: Borealis)

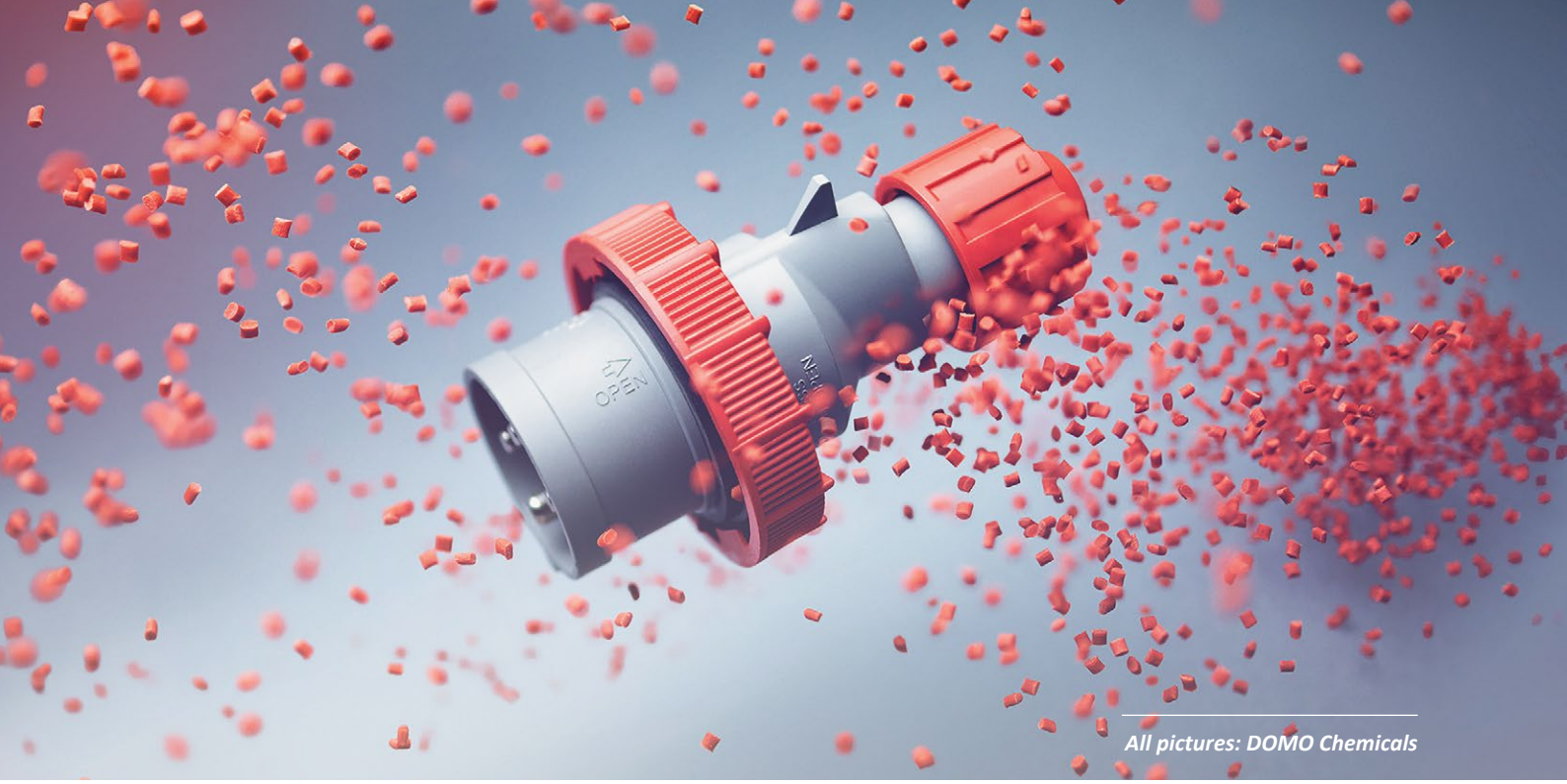
About Borealis

Borealis is one of the world's leading providers of advanced and sustainable polyolefin solutions. In Europe, Borealis is also an innovative leader in polyolefins recycling and a major producer of base chemicals. The company leverages its polymer expertise and decades of experience to offer value-adding, innovative and circular material solutions for key industries such as consumer products, energy, healthcare, infrastructure and mobility.

With customers in over 120 countries and head office in Vienna, Austria, Borealis employs around 6,200 people. In 2024, Borealis generated a net profit of EUR 566 million. OMV, the sustainable chemicals, fuels and energy company with a focus on circular economy solutions, headquartered in Vienna, Austria, owns 75% of Borealis shares. The Abu Dhabi National Oil Company (ADNOC), based in the United Arab Emirates (UAE), owns the remaining 25%.

In re-inventing essentials for sustainable living, Borealis builds on its commitment to safety, its people, innovation and technology, and performance excellence. The company is accelerating the transformation to a circular economy of polyolefins and expanding its geographical footprint to better serve the customers around the globe. Borealis operations are augmented by two important joint ventures: Borouge (with ADNOC, headquartered in the UAE); and Baystar™ (with TotalEnergies, based in the US). **smi**

Borealis
www.borealisgroup.com



All pictures: DOMO Chemicals

DOMO Chemicals at K 2025: Accelerating specialization for a low-carbon future

• DOMO Chemicals showcases its accelerated shift toward a more specialized, low-carbon portfolio with breakthrough polyamide solutions at K 2025
• Innovations structured around the four elements - Earth, Air, Fire, and Water - highlight sustainable, lightweight, flame-retardant, and water-safe materials
• Key highlights include DOMAMID® MBB with nearly 100% CO_2 reduction, new EV flame-retardant grades, and a joint breakthrough in recycled PA applications with AUDI AG and Fraunhofer

At K 2025 in Düsseldorf, DOMO Chemicals, a leading supplier of high-performance polyamide materials, will demonstrate how it is boosting its drive towards a more specialized, low-carbon portfolio, setting new benchmarks in innovative and sustainable polyamides. With the theme "Building the Future Together", DOMO invites customers and industry partners to explore how collaboration, innovation, and sustainability can shape the future of performance materials.

With 10 production sites, 14 sales offices and a strong European base, DOMO focuses its progress on its Engineered Materials and Polymer & Intermediates businesses by combining global scale with local application expertise. "Backed by a robust sustainability strategy, we are increasing capacity in Asia, optimizing our European operations and focusing on renewable energy, partnerships and technological breakthroughs, " says Yves Bonte, CEO of DOMO Chemicals.

Experience innovation through the four elements

At K 2025, DOMO's fully digital and interactive booth will showcase its innovations across four key application pillars – each inspired by one of the four classical elements:

- EARTH – Bio-based and recycled polyamide solutions
- AIR – Lightweight materials enabling metal replacement and CO_2 reduction
- FIRE – Flame-retardant and high-temperature-resistant materials for EVs, E&E and performance fibers
- WATER – Safe, high-performance solutions for fluid handling and sanitation

"This insightful concept helps illustrate how our tailored polyamide solutions contribute to lighter, safer and more circular applications," Bonte added.

Sustainable polyamide: Leading in recycling technologies

DOMO's leadership in sustainable polyamide recycling will take center stage. Visitors will see applications using:

- Mechanical recycling
- The patented MOVE 4EARTH® process
- Chemical recycling: Depolymerized polyamide-based solutions
- Mass balance bio-circular solutions (ISCC PLUS certified) and
- Physical recycling (dissolution)

At the stand, visitors will discover parts developed with a new physical recycling technology (dissolution), which is the result of a collaborative project between AUDI AG, the Fraunhofer Institute and DOMO. In the pilot project, both PA6 and PA66-based applications have been successfully molded using a 30% recycled PCR from end-of-life vehicles, meeting OEM requirements.

"We offer the broadest sustainable polyamide portfolio on the market, supported by local application expertise that helps customers integrate recycled materials into their specific applications," says Juha Jokinen, CCO of DOMO Engineered Materials.

DOMAMID® MBB: Moving towards net-zero

In a milestone for climate-neutral innovation, DOMO will present DOMAMID® MBB – a mass-balanced, bio-attributed PA6 with up to 69% bio-attributed content and ISCC PLUS certification. "These materials achieve a significant CO_2 reduction compared to fossil-based alternatives," says Vedran Kujundzic, CCO of DOMO Polymers & Intermediates. "They are ideal for food and pharma packaging, textiles, and engineering plastics."

Lightweighting: Enabling new mobility

Sustainable mobility begins with lighter components. DOMO's booth will highlight:

- A one-piece gas-molded bicycle handlebar using a TECHNYL® compound in combination with UD tapes reinforcements for Canyon in collaboration with ENGEL
- A child car seat that combines lightweight design, safety, and sustainability
- A hybrid bonding solution enabling optimal adhesion of polyamides to metals developed for Sogefi Air & Cooling

Reinventing safety in e-mobility and electronics

As electrification accelerates, so do safety demands. DOMO will showcase for the first time:

- New TECHNYL STAR® halogen-free FR solutions for EV battery modules and busbars
- A breakthrough material for battery housing applications
- Advanced developments in halogen-free flame-retardant solutions for electrical and electronics applications under the TECHNYL® PROTECT brand

In addition, Siemens Smart Infrastructure and DOMO Chemicals have recently introduced Siemens' first residual current circuit breaker (RCCB) made with sustainable TECHNYL® 4EARTH® polyamide, which contains 50% chemically recycled content and delivers identical performance and quality to conventional materials. This UL-certified material, developed by DOMO, enables Siemens to significantly reduce the environmental impact of its SENTRON 5SV3 RCCBs while maintaining the highest safety and quality standards.

Smarter water management

DOMO's advanced polyamides help reduce costs, enhance system reliability, and promote sustainability in water infrastructure. At K 2025, DOMO will showcase TECHNYL® SAFE, certified for food and drinking water contact - now available for use in household, water meter, and sanitary applications.

Proven leadership in sustainability

DOMO's progress toward its 2030 sustainability goals will soon be published in its Sustainability Report. Key highlights include:

- EcoVadis Platinum rating in 2024, moving from Silver to Platinum in two years
- More than 10% of Engineered Materials sales from circular and bio-based materials
- Significant gains in renewable energy, water efficiency, and energy intensity improvement. *smi*

DOMO Chemicals
www.domochemicals.com

Unbreakable champagne glasses were molded from next-generation copolyester

Gold Plast S.p.A. and Lehmann joined forces to supply prestigious Moët & Chandon Champagne house with unbreakable glasses made from Tritan Renew recycled material, produced by Eastman.

Gold Plast S.p.A. and Lehmann have recently announced their collaboration to supply unbreakable glasses for the prestigious Moët & Chandon Champagne house. This collaboration represents a significant step toward environmental sustainability thanks to the use of Tritan™ Renew from Eastman, a polymer with multiple innovative properties and among the first to be obtained through new molecular recycling technologies.

Tritan Renew is a next-generation copolyester produced by Eastman using up to 50% recycled material through an advanced chemical recycling process that maintains the original material's properties without degradation. This method not only reduces the amount of waste destined for landfills or potentially dispersed in the environment but also generates fewer greenhouse gas emissions compared to traditional production methods based on virgin raw materials, whose consumption is thus reduced by half.

The material is known for its high chemical and thermal resistance as well as its exceptional transparency and brilliance, making it particularly suitable for the creation of high-end products. One of the main features of Tritan Renew is the total absence of bisphenol A (BPA), a chemical recognized as an endocrine disruptor by the international medical and scientific community. The absence of BPA makes Tritan Renew a material that is not only environmentally friendly but also safe for food contact.

Unbreakable glasses for Moët & Chandon

The supply of unbreakable glasses to Moët & Chandon results from the complementary skills of Lehmann, a leader in the production of glassware for the wine world, and Gold Plast, specialized in the production of high-quality unbreakable tableware using various types of polymers and with an approach that integrates design development and mold and equipment production.

The study of the finished product, specifically for Moët & Chandon and with Lehmann's expertise in glassware, is based on the pursuit of the highest functional and productive quality with the lowest possible environmental impact.

The choice of Tritan Renew has allowed the companies to achieve all the objectives, including naturally preserving the organoleptic properties of champagne and guaranteeing a tasting experience worthy of the prestigious brand, even when the safety derived from unbreakability is a fundamental requirement.

Picture source: Eastman

Moët & Chandon: Commitment to sustainability and high quality

Moët & Chandon is one of the most prestigious champagne houses in the world. Founded in 1743 by Claude Moët, it is renowned for producing high-end champagne by combining tradition and innovation. With over 1,000 hectares of vineyards and several prestigious brands in its range, the company is strongly committed to environmental sustainability, adopting sustainable agricultural practices and promoting biodiversity through the Natura Nostra program.

The choice to use glasses made with an innovative material like Tritan Renew is in line with its continuous commitment to reducing environmental impact, preserving the brand's elegant image, and ensuring high-level and safe sensory experiences. ***smi***

Eastman
www.eastman.com

exhibitions calendar

K
8-15 October 2025
Düsseldorf, Germany
www.k-online.com

K is the world's largest trade fair for the plastics and rubber industry. It gathers the most important supplier of plastics and rubber machinery, raw and auxiliary materials and semi-finished products, technical parts and reinforced plastic products under one roof. It is an ideal platform to showcase products and innovations and to make business contacts.

Formnext
18-21 November 2025
Frankfurt am Main, Germany
www.formnext.com

Formnext is the leading exhibition and conference dedicated to additive manufacturing and all of its upstream and downstream processes. It is where experts from a wide range of industry sectors, such as automotive, medical technology, electrical engineering, and many more, come together to discover additive manufacturing production technologies for themselves.

Plast Eurasia
3-6 December 2025
Istanbul, Turkey
www.plasteurasia.com

The exhibition areas of the Plast Eurasia include plastic, machinery and equipment, mold making, plastic products, raw materials, packaging technology, hydraulics and pneumatics, as well as related industries and trade journals. International exhibitors can present their latest trends, products and developments to an interested audience here.

Plastindia
5-10 February 2026
New Delhi, India
www.plastindia.org/plastindia-2026

Plastindia is an international plastics exhibition and conference where national and international exhibitors present their new products and technologies. It is an ideal meeting place for buyers and sellers, joint ventures etc. and also enhancement business prospects, strategic alliance and technology transfer.

Asiamold Select
4-6 March 2026
Guangzhou, China
www.asiamold-china.cn.messefrankfurt.com/guangzhou/en.html

Asiamold Select is a leading trading platform for China's mould and die industry. The fair is dedicated to assisting industry players by offering an array of the latest mould making, 3D printing and die casting technologies and solutions to help participants to enhance their business results. It will be held concurrently with Smart Production Solutions Guangzhou.

SOLIDS
18-19 March 2026
Dortmund, Germany
www.solids-recycling-technik.de/en/

At SOLIDS local and international exhibitors present innovative concepts and concrete solutions. Decision-makers within the industry and trade fair visitors communicate as an equal. The compact event format across two days guarantees an efficient visit. Additional synergy: The RECYCLING-TECHNIK trade fair is held at the same time.

CHINAPLAS
21-24 April 2026
Shanghai, China
www.chinaplasonline.com

Chinaplas is the largest plastics and rubber trade fair in Asia and widely recognized by the industry as one of the most influential exhibitions in the world. The rapid development of science and technology has dramatically increased the range of applications of plastics and rubber in various manufacturing sectors, including automobile, electronics, information technology and others.

Equiplast
2-5 June 2026
Barcelona, Spain
www.equiplast.com/en/

Equiplast is a specialized trade fair in the field of plastic manufacturing. It is a meeting ground for manufacturers from Europe and South America. The Equiplast shows innovations of plastic and rubber production. Here innovation and sustainability come together to accelerate the transformation of plastic towards a more circular and sustainable future.

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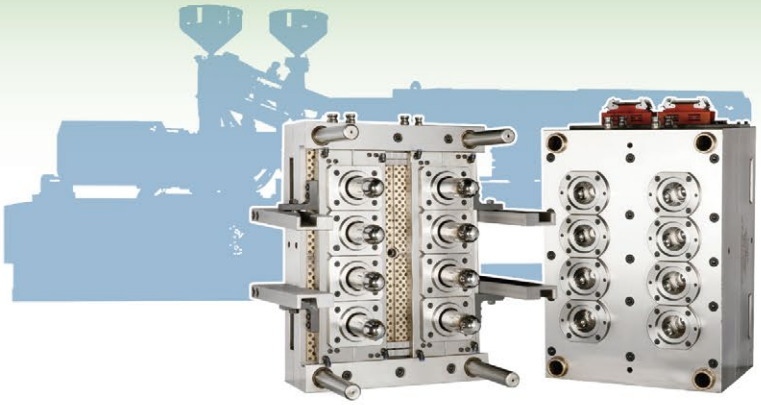

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