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international
1/2025
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exhibitions calendar

CHINAPLAS
15-18 April 2025
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 and electrical appliances, information technology and telecommunication, building and construction and others.

Moulding Expo
6-9 May 2025
Stuttgart, Germany
www.messe-stuttgart.de/moulding-expo/en/

The focal points of Moulding Expo are small and medium-sized tool, pattern and mould making companies along with their expertise and know-how for the implementation of customer-specific projects. Moulding Expo also features all the relevant technology partners in the industry: from standard components, materials, hot runner systems, processing tools, clamping devices and machine tools through to testing and measurement technology and software suppliers.

KUTENO
13-15 May 2025
Bad Salzuflen, Germany
www.kuteno.de/en/

KUTENO is the efficient supplier fair for the entire process chain of the plastics processing industry. As a trade and work fair in the northern German region, KUTENO in Bad Salzuflen is the platform for professional expert dialogue for the entire industry.

Plastpol
20-23 May 2025
Kielce, Poland
www.targikielce.pl/en/plastpol

Plastpol is one of the largest exhibitions in Poland and Eastern Europe dedicated to the plastics industry. It features all areas of plastics processing beginning with the first stages of plastic production and finishing with its disposal and recycling. Among the exhibits are plastics processing machines, moulds as well as a wide variety of plastics, recycling technologies and IT solutions.

Green Plast
27-30 May 2025
Milan, Italy
www.greenplast.org

Green Plast is a plastics and rubber industry event dedicated to innovative solutions to boost environmental sustainability, energy efficiency, options for Reducing-Reusing-Recycling, and progress towards a circular economy.

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, aerospace, mechanical engineering, medical technology, electrical engineering, and many more, come together to discover additive manufacturing, industrial 3D printing, and innovative 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.

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VM Verlag GmbH: Krummer Büchel 12,
50676 Cologne, Germany

EDITORS
Konstantin Faticzev (Editor-in-Chief)
editor@smart-molding.com

ADMINISTRATION
Alla Kravets
Tel. +49 2233 949 8793
a.kravets@vm-verlag.com

ADVERTISING and SALES
Martina Lerner
Tel. +49 6226 971515
lerner-media@t-online.de

Tanja Bolta
Tel.+49 1520 5626122
t.bolta@vm-verlag.com

Maria Melis
m.melis@vm-verlag.com

Front page picture: ENGEL

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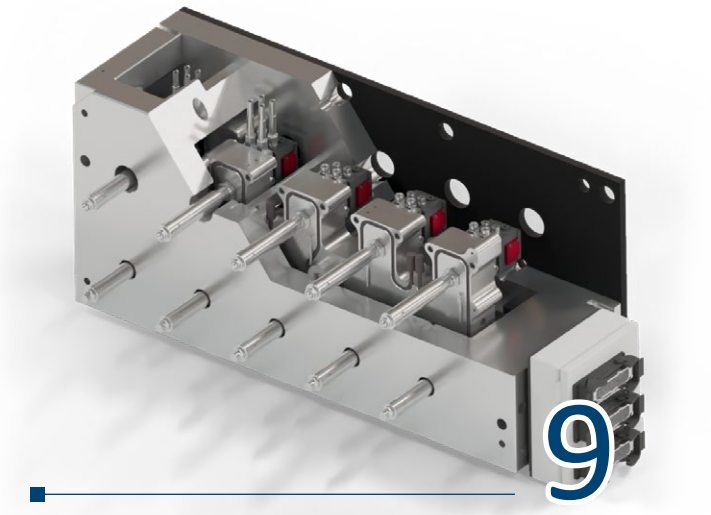
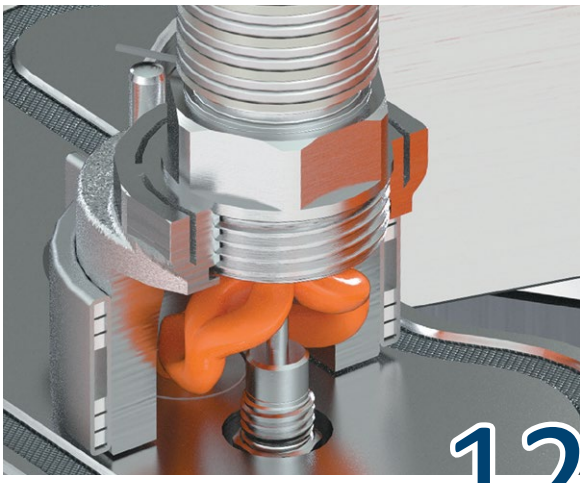


Barnes Group Inc., a global provider of highly engineered products, differentiated industrial technologies and innovative solutions, has announced that funds managed by affiliates of Apollo have completed the previously announced acquisition of Barnes in an all-cash transaction with a total enterprise value of approximately $3.6 billion. “We are pleased to announce the completion of our transaction with Apollo Funds, which opens the door to the next phase in Barnes’ evolution,” said Thomas J. Hook, President and CEO of Barnes.

Since 2007, HICAP Group and Haitian Plastics Machinery have embarked on a collaborative journey founded on technology and trust. Haitian injection molding machines are integral to HICAP’s operations, powering its six nationwide bottle cap production bases. The stable performance of over 200 Haitian injection molding machines demonstrates the depth of this partnership. At the Huai’an facility alone, 96 Haitian machines are planned for deployment, with 39 already operational. The factory is scaling up its production capacity.



Innovative Shadowfree technology as module element eliminates shadow formations in valve gate systems. In conventional injection moulding, undesirable, poorly flowing areas often occur in the hot runner due to roughness around the valve pin. This results in degradation reactions in the plastic melt and exceptionally long colour transitions. The innovative Shadowfree technology as module element eliminates the flow shadows in valve gate systems and enables a significantly faster colour change in the hot runner.

“The SmartPower injection molding machines offer extremely precise machine movements together with strong dynamism and high efficiency” says Cássio Luis Saltori, Managing Director of WITTMANN BATTENFELD do Brasil. “With these attributes, the series is predestined for use in the particularly price-sensitive production of upmarket cosmetics packaging.” The drive-on-demand technology combines fast-responding motors with powerful constant displacement pumps to enable extremely fast and simultaneously precise machine movements.

Digital light processing machines produce high-quality Big on quality. Small in footprint. The new INTRAVIS’ CapWatcher Compact combines a sorting, feeding and inspection unit for the quality control of plastic closures in a single, compact solution. Based on many talks with the customers, the system addresses one of the largest problems in modern production facilities – the availability of space! The CapWatcher Compact saves up to 50% of the floor space compared to conventional solutions and simultaneously maintains INTRAVIS’ renowned commitment to quality.

To all industries relying on high-performance thermoplastics, BASF is now offering the world’s first biomass-balanced polyethersulfone (PESU). Ultrason® E 2010 BMB contributes to substituting fossil resources, reducing greenhouse gas emissions, and increasing the use of renewable feedstock. This unique PESU enables customers in industries as diverse as household and catering, automotive, electrics and electronics (E&E), healthcare as well as water and sanitary to differentiate their products from the competition.

ENGEL expands production capacities in the Americas: new plant opened in Mexico

ENGEL is strengthening its market presence in the Americas with the grand opening of a new production facility in Querétaro, Mexico. This strategic step marks a substantial expansion of ENGEL's regional manufacturing capabilities, aimed at providing faster delivery times and increased availability of injection molding machines for customers across the Americas.

With this expansion, ENGEL is reinforcing its commitment to bringing production closer to customers in the region. The new facility allows increased efficiency and greater responsiveness to market demands.

Enhancing Regional Presence

The newly acquired facility provides ENGEL with the necessary capacity and infrastructure to significantly scale up production. "This expansion allows us to notably accelerate the start of production, ensuring increased availability of our machines for customers across the region," says Stefan Engleder, CEO ENGEL Group.

Vanessa Malena, President ENGEL Americas, also reinforces the long-term commitment to the region: "Mexico plays a crucial role in our global production strategy and is a key market for injection molding technology. With this facility, we are enhancing our local manufacturing footprint while ensuring a seamless experience for our customers, from production to after-sales support."

Furthermore, the Querétaro facility offers ample space for future expansion.

Nils Mayer, General Manager ENGEL Machinery Mexico

ENGEL production facility in Querétaro, Mexico (all pictures: ENGEL)

The decision to acquire this property was made with long-term growth in mind, ensuring that ENGEL can further increase production capacity if market demand continues to rise.

Increasing production and growing the team

ENGEL will ramp up Mexican production rapidly, strengthening its ability to supply high-quality injection molding machines to customers across the Americas. The facility is designed to support a structured production flow, ensuring the flexibility needed to adapt to evolving market demands.

In addition to increasing production, ENGEL is also expanding its workforce. "We are growing our team significantly to support our manufacturing operations and customer service in the region," says Nils Mayer, General Manager ENGEL Machinery Mexico. "This investment is not just about expanding our facility, but also about strengthening our expertise and presence in the local market."

A strategic investment for the future

The Querétaro facility will undergo a phased modernization to align with ENGEL's high production standards. As part of a long-term investment plan, ENGEL is implementing key upgrades, including the further expansion of the flow-line manufacturing system, and extended machining capabilities. These improvements will optimize production efficiency while maintaining the company's renowned quality standards.

ENGEL will manufacture the e-mac (all-electric small machine) and WINTEC t-win (hydraulic, two-platen large machine) series, as well as custom robots and automation solutions at this facility, ensuring a strong production base for these high-demand machines in the region. This investment in local manufacturing will allow ENGEL to better serve customers with tailored solutions and faster delivery times.

"With this expansion, we are well-positioned to meet the growing demand for injection molding machines in the region," adds Stefan Engleder. "By reducing lead times and strengthening regional support, we are creating sustainable value for our customers. This facility is an important step in our continued expansion across the Americas."

Long-Term Vision for ENGEL in Mexico

ENGEL views Mexico as a key industrial and production hub. The country offers a strong manufacturing base and skilled workforce, making it an ideal location for long-term investment. Additionally, Mexico and Latin America represent important and growing markets for injection molding technology.

ENGEL
www.engelglobal.com

Netstal strengthens global customer proximity and establishes its own subsidiary in Mexico

Netstal has founded its own subsidiary in Mexico for sales and customer service with immediate effect. The new company is based in Santiago de Querétaro. Netstal is taking over the existing employees and Netstal business operations of iTech Latinoamérica, which previously represented the brand in Mexico as an independent agency. With this step Netstal is expanding its personnel capacities in the important Mexican market. Customers will benefit from competent consulting and comprehensive services right from the start.

The newly founded company has been operating under the name NETSTAL Máquinas, S. de R.L. de C.V. in the premises of the former iTech Latinoamérica in Santiago de Querétaro since January 14, 2025. Netstal Mexico, a subsidiary of NETSTAL Maschinen AG, Switzerland, has successfully employed the talented team from iTech Mexico into its operations. Furthermore, the owners of iTech have independently decided to cease operations indefinitely by dissolving their company. The new Netstal Mexico team comprises 7 employees in the areas of sales, customer service and administration. José Lelo de Larrea has been entrusted with the management of the Mexican Netstal subsidiary. He co-founded iTech Latinoamérica in 2010 and successfully built up iTech as a managing partner. Since 2023, the company has been the official representative for Netstal in the strategically important Mexican market. iTech's co-founding partners, Rod Selem and Irineu Scalisse will continue to play a valuable role as business and technical advisors for Netstal in the region.

Renzo Davatz, CEO: "In line with our strategy, with this step we are further expanding the global Netstal organization under the umbrella of Krones. Following the opening of Netstal Dubai in 2024, we are establishing the next subsidiary in the growth market of Mexico. I would like to welcome all new employees in Mexico to the global Netstal team and wish José Lelo de Larrea every success in his new role as Managing Director."

Looking forward to the new cooperation (from left to right): Renzo Davatz, CEO Netstal, José Lelo de Larrea, Managing Director Netstal Mexico and Nadeem Amin, President Netstal Americas (photo: Netstal)

Netstal provides the world's leading injection molding solutions in superlative Swiss quality to deliver optimal manufacturing efficiency. To this end, the company is customer-centric and strives to create value. The focus is firmly on the customers, markets and a sustainable future.

Nadeem Amin, President Netstal Americas: "We're excited to expand our presence in Mexico with the establishment of our new subsidiary. This step allows us to better serve our customers by leveraging the exceptional expertise of our new team members in PET, closures, packaging and medical applications. With our cutting-edge injection molding machine technology and best-in-class services, we are committed to helping our customers maximize production efficiency and achieve their goals. I'm thrilled to collaborate with José Lelo de Larrea and his talented team as we continue to deliver outstanding solutions tailored to our customers' needs."

José Lelo de Larrea, Managing Director Netstal Mexico: "I am thankful to Renzo, Nadeem and the Netstal management team for depositing their trust in me and my colleagues to lead this new chapter for Netstal Mexico. We are very excited about this endeavor where we will dedicate our experience focusing completely on bringing our valued customers full local commercial and technical support. I am very happy with the challenge and opportunity to help Netstal bring value to the market through its high quality and technologically advanced machines as well as peripheral equipment to complete systems with its trusted partners."

Netstal
www.netstal.com

New APAC headquarters for PiovanGroup

Investment of 10 million euros in Suzhou, China, to strengthen the Group's presence in Asia. Goals: innovation, sustainability, training and support to regional subsidiaries. Inauguration on January 15, 2025 with the participation of Italian and Chinese authorities.

Twenty-five years after the establishment of its first subsidiary in China, Piovan Industrial Automation Co.Ltd opens a new facility in Suzhou, Jiangsu Province, for a total investment of more than 10million euros. The 15,000-square-meter facility is designed to promote the PiovanGroup in Asia-Pacific as a leading player in the development and production of complete automation systems for plastics processing, food powders and refrigeration solutions. The new facility will provide equipment, engineering consulting, training, and after-sales service to all subsidiaries in the Group's APAC region, including Piovan Asia Pacific in Bangkok, Piovan Vietnam in Ho Chi Minh City, Piovan Japan in Kobe, Piovan Korea in Seoul, South Korea, Piovan Indonesia in Jakarta, and Conair Asia in Taiwan and Singapore.

The development of an international network with direct branches is a strategy that has enabled PiovanGroup to be always at the side of its customers and give quick and effective support to distributors. PiovanGroup's first sales office in Asia was opened in 1997 in Singapore; the first production facilities are in 2005 in Zhuhai (Guangdong province) and 2008 in Suzhou, (Jiangsu province), respectively. “China is a market that the Group has always believed in by opening its first production site outside Italy 20 years ago. - says PiovanGroup CEO Filippo Zuppichin. – We were convinced that China was becoming the manufacturing engine of the world. The facts and growth in recent years have confirmed this, and we are confident of future successes.”

All photos: PiovanGroup

In the new Suzhou HQ, thanks to the work of 50 engineers (out of 130 total employees), emphasis will be placed on innovation and development projects. The commitment to sustainability will find implementation, for example, in the production of green energy (estimated 1MWh annually) provided by the solar panel system. The Heat Transfer Division within Piovan Industrial Automation will also provide a full range of cooling systems for industrial applications.

The inauguration was attended by the Consul General of Italy, Tiziana D'Angelo, the Deputy Mayor of Suzhou, Mao Wei, representatives of the Italian Chamber of Commerce, the European Chamber of Commerce, the Italian Trade & Investment Agency (ICE), SACE the Italian insurance-financial group, directly controlled by the Ministry of Economy and Finance, and representatives of the Suzhou Government. For PiovanGroup present were Group CEO Filippo Zuppichin, Group CCO Felice Meliti and Regional CEO Asia Flavio Zaghini.

The inauguration of the Suzhou facility, just over a month after the extension of the Indian Nu-Vu Conair plant, is a milestone that consolidates the Group's commitment in one of the world's most strategic markets. It is a step forward that looks to the future while holding firm to the global vision and focus on quality that has distinguished PiovanGroup for ninety years.

PiovanGroup
www.piovan.com

Factory expansion of the American subsidiary

NISSEI PLASTIC INDUSTRIAL CO., LTD., a Japanese company headquartered in Nagano, Japan and led by President Hozumi Yoda, has been strengthening their global production network. The factory expansion of their US production base in Texas is now complete, and the added building will be operational from February 2025.

Manufacturing and sales of injection molding machines, located in Brooks City Base Industrial park, San Antonio, TX, USA (photo: NISSEI PLASTIC INDUSTRIAL)

As a global supplier of injection molding machines, NISSEI has a management strategy of producing and delivering ideal machines from the nearest production bases to meet demands in each region. NISSEI has followed its strategical plan and established a global production system with five production bases in Japan, China, Thailand, United States, and Italy.

NISSEI's US production subsidiary was established in November 2016 to provide large-size injection molding machines to the North American market on a stable basis and with short delivery times. The operation of the US factory began in March 2018.

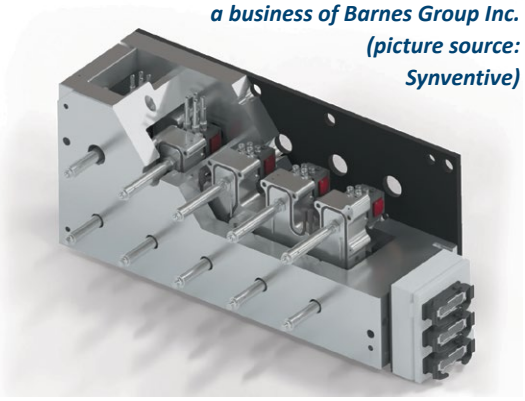
At the time of its opening, a series of tariffs was imposed on China during the first Trump administration, and the reshoring trend has gained significant momentum as a result. To meet these regional needs, NISSEI has been steadily increasing the assembly and production of large hybrid type injection molding machines at the US factory, delivering over 200 units to the North, Central, and South American markets to date. Large injection molding machines with 560 tons to 1,300 tons clamping force are currently being produced in the US factory, and NISSEI has been receiving many inquiries about super large-size injection molding machines, mainly for the automotive, housing, and construction material industries in North America. The decision to expand the US factory was made in March 2023, and the added floor will allow NISSEI to assemble injection molding machines with clamping force up to 3,000 tons.

With the start of the second Trump administration in the U.S., all eyes, including people in Japan and around the globe, are on President Trump's new tariff plans. Coincidentally, NISSEI is launching the operation of the added factory building, and they consider it is a perfect timing to expand their Made-in-USA machine lineups, increasing their presence in the US market. In addition, NISSEI AMERICA, the US subsidiary of NISSEI Group, integrated production and sales functions in 2021, making their operation streamlined and efficient. It has been benefitting their customers by providing meticulous services and precisely meeting their needs.

NISSEI PLASTIC INDUSTRIAL
https://www.nisseiplastic.com

Apollo Funds completed acquisition of Barnes Group

In January, Barnes Group Inc., a global provider of highly engineered products, differentiated industrial technologies and innovative solutions, and Apollo announced that funds managed by affiliates of Apollo (the "Apollo Funds") have completed the previously announced acquisition of Barnes in an all-cash transaction with a total enterprise value of approximately $3.6 billion.



A tailored hot runner solution, developed by Synventive® – a business of Barnes Group Inc. (picture source: Synventive)

"We are pleased to announce the completion of our transaction with Apollo Funds, which opens the door to the next phase in Barnes' evolution," said Thomas J. Hook, President and Chief Executive Officer of Barnes. "Under Apollo Funds' ownership, we are well positioned to accelerate our transformation strategy, enhance our capabilities and broaden our product offerings to create new opportunities for increased growth and innovation."

"We are excited to reach this milestone with the Barnes team and for the tremendous opportunity to accelerate the growth of the Company's strong portfolio of businesses across the aerospace and industrial sectors," said Antoine Munfakh, Partner at Apollo. "Barnes has a proud legacy of innovation, close customer relationships and is uniquely positioned to benefit from robust aerospace demand trends. We look forward to partnering with the Barnes team to help them continue to solve their customers' most complex challenges."

The transaction was announced on October 7, 2024, and approved by Barnes shareholders at the Company's Special Meeting of Shareholders on January 9, 2025. With the completion of the acquisition, Barnes' common stock has ceased trading and will be delisted from the New York Stock Exchange.

Barnes
www.onebarnes.com

New leadership chapter at Sumitomo (SHI) Demag North America

Sumitomo (SHI) Demag North America has revealed its next leadership development. The leadership change announcements reinforce the company's commitment to growth and innovation, whilst also retaining the company's dedication to customer excellence.

Effective April 1, 2025, Liam Burns assumes the role of President, bringing extensive industry experience and a strong vision for the company's future. Liam Burns has been with Sumitomo (SHI) Demag for the past two years, serving as Senior Manager for Northeast Regional Sales. Prior to working at the company, he had been involved in the injection molding industry for 36 years, garnering experience in both managerial and technical positions.

In his new role, Burns will focus on external initiatives, driving customer value, strengthening partnerships, and elevating the global Sumitomo (SHI) Demag brand messaging across North America. Customer-centric strategies and market expansion will underline this strategy to support the company's long-term growth.

"Innovation and customer excellence have always been central to Sumitomo (SHI) Demag's global success. I'm honored to take on this role and build on our strong foundation. I look forward to connecting with our customers, gaining deeper insights into their needs, and working together to shape the future of our industry," says Burns.

Additionally, John F. Martich III, who has been serving as Executive Vice President, accepts the expanded role of Chief Operating Officer (COO) effective the same day. Within this role Martich will oversee internal operations, ensuring efficiency, innovation and complete alignment to the company's global strategic objectives. Collaborating closely with Beth Belay, Corporate Controller & Compliance Officer, Martich remains resolutely focused on enhancing operational excellence and optimizing business processes.

Photo: Sumitomo (SHI) Demag

Congratulating the team on these newest leadership appointments, Group CSO Anatol Sattel comments: "With this dynamic leadership team in place, Sumitomo (SHI) Demag North America is well-positioned to expand its market influence and international reach by continuing to provide innovative solutions to the plastics manufacturing industry."

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

Husky welcomes Balaji Suresh as new Chief Operations Officer

Husky Technologies™, a global leader in injection molding technology and solutions, is pleased to announce the appointment of Balaji Suresh to Chief Operations Officer (COO). With over two decades of experience in global manufacturing, supply chain, and operational leadership, Balaji brings a wealth of expertise to Husky at a pivotal moment in the company's growth journey.

Balaji joins Husky from L3Harris Technologies, where he served as Vice President of Global Supply Chain, leading enterprise-wide operations and supply chain initiatives. His career is marked by a strong commitment to operational excellence, digital transformation, and strategic growth. He has successfully implemented lean transformations, optimized complex supply chains, and driven customer-focused solutions in dynamic industrial environments.

"Balaji embodies the core values that define Husky's relentless pursuit of excellence," said Bradley Selleck, Husky's CEO. "His deep expertise in digital manufacturing innovation, coupled with his ability to build and inspire high-performance teams, makes him the ideal leader to elevate our operations and accelerate our ambitious growth trajectory. His passion for technology-driven transformation and commitment to delivering superior customer value align seamlessly with Husky's strategic vision."

Photo: Husky

As COO, Balaji will oversee Husky's global manufacturing and supply chain operations, ensuring seamless integration of cutting-edge digital solutions and lean manufacturing principles to enhance efficiency and customer experience. His leadership will play a crucial role in strengthening Husky's operational resilience and reinforcing its industry leadership in precision engineering and sustainable manufacturing solutions.

"I am thrilled and honored to join Husky at such an exciting time," said Balaji Suresh. "Husky's reputation for excellence, innovation, and customer-centricity is unparalleled, and I look forward to working with this incredible team to deliver on our commitments through operational excellence, technology, and innovation."

Husky
www.husky.co

HEKUMA to be renamed “BBS Automation” as four brands become one

Since 2023, the BBS, Kahle, teamtechnik and HEKUMA brands have, together, formed the “Production Automation” Business Unit in the Dürr Group, with 2,500 employees at 20 sites world-wide.

To bring this cooperation to the fore, they will operate under a single, uniform brand, “BBS Automation”, from June 2025. Together, these companies offer a comprehensive portfolio for a wide-range of sectors, from insertion and take-out technology to feeder technology, assembly and test lines and palletizing systems – solutions from a single source, world-wide.

They are therefore concentrating on building a strong brand, especially in relation to their customers.

The Hallbergmoos site is and remains the specialist for automation in all aspects of injection molding.

Four brands united – the advantages at a glance:

- Extensive portfolio & know-how – process expertise from A to Z with a global team of experts in many areas of automation
- Everything from a single source – extended system concepts and technologies from a single supplier and simplified project management through a single point of contact or general contractor
- Significantly expanded production capacities – potential to shorten lead times and access to more cost-effective manufacturing options
- Optimized service – guarantee of fast support through a large number of local service locations
- Reduced technical risk – sophisticated and proven platforms for different technologies and production requirements

Picture source: HEKUMA

HEKUMA
www.hekuma.com

BOY at CHINAPLAS 2025

From April 15 to 18, Chinaplas in Shenzen will once again open its doors to national and international trade fair visitors. BOY presents two of its injection moulding machines. BOY representative Trillion Machinery Holdings demonstrates different applications on a BOY 22 A PRO as well as on the highly compact BOY XS E at the BOY booth.

With a footprint of just 1.85 m², the versatile BOY 22 A PRO injection moulding machine offers a clamping force of 220 kN. Various screw diameters from 12 to 32 mm allow a wide range of applications. In addition to thermoplastics, elastomers, silicones and thermosetting plastics can also be easily processed with this proven multi-talent. Since its foundation in 1968, BOY has produced and sold more than 25,000 machines of this clamping force class worldwide.

With a maximum clamping force of 100 kN and a footprint of just 0.87 m², the BOY XS E with its innovative and proven technologies offers a wide range of applications in micro and sprueless injection moulding of small parts. With a three-zone screw based on the “first in first out principle”, common materials can be processed without any problems.

Carlo Gessert: “As Head of International Sales at BOY, I am responsible to advise our international representatives on the technical diversity of injection moulding machines and thus providing the best possible solution for our end customers. It is a pleasure for us to present our injection moulding machines together with our partner Trillion Machinery Holdings at Chinaplas again this year. With enthusiasm we look forward to welcoming this year's Chinaplas visitors and the exciting projects expecting us.”

BOY
www.dr-boy.de

Picture: BOY

Molding novelties in 2024

Throughout 2024, various companies, focussing on designing and manufacturing of machines, automation, auxiliary systems and tooling, were tirelessly launching their new developments for benefit of the injection molding sector. Many of these state-of-the-art novelties were demonstrated at the 29th edition of Fakuma - one of the world's leading plastics and rubber trade fairs, that was held in Friedrichshafen, Germany, from 15 to 19 October 2024.

Innovative Shadowfree technology as module element eliminates shadow formations in valve gate systems

In conventional injection moulding, undesirable, poorly flowing areas often occur in the hot runner due to roughness around the valve pin. This results in degradation reactions in the plastic melt and exceptionally long colour transitions.

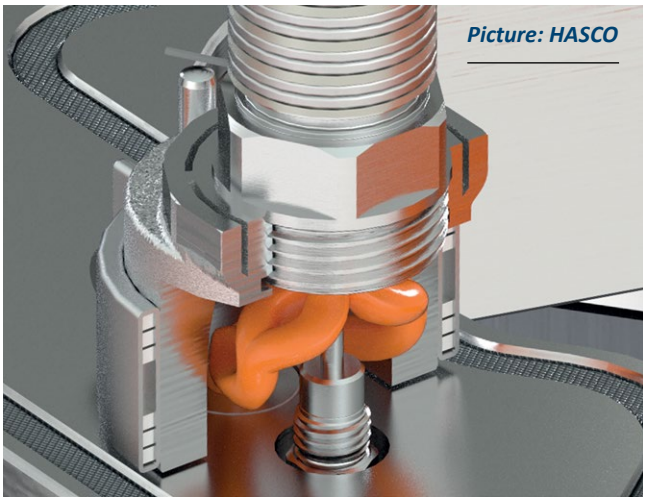
The innovative Shadowfree technology as module element eliminates the flow shadows in valve gate systems and enables a significantly faster colour change in the hot runner.

Uniform flushing around the needle

The 3D-printed, floating system effectively splits the material flow into streamlined channels to evenly flush around the needle and reunites them at the point where the valve pin enters the melt channel. Rigorous testing has shown that the system provides a rapid transition from black to white material in just 25 cycles, outperforming conventional valve gate systems by three to four times.

In addition to the proven advantages of the Streamrunner®, such as the elimination of dead spots, a particularly gentle material flow and thus a noticeable reduction in pressure losses, the Shadowfree technology now also offers a solution for extremely sensitive materials in terms of heat stability in combination with valve gate systems.

With the additively manufactured Streamrunner®, HASCO started a new era in the world of hot runner technology. It was developed with state-of-the-art technologies for innovative



Picture: HASCO

future-oriented solutions. The compact and perfectly balanced Streamrunner® ensures particularly gentle melt guidance in combination with excellent colour change characteristics. The leak-proof system is also particularly suitable for multi-cavity systems.

Super-fast colour changes with valve gate systems

The Streamrunner® Shadowfree is now well on its way to further revolutionising the manufacturing landscape. With up to 70% faster colour changes, the system enables material losses to be reduced and product quality to be increased.

Picture: SACMI

Cap and PET preform production molds: SACMI innovation and know-how make the difference on injection and compression moldings

Know-how and innovation make SACMI the world's stand-out provider of rigid packaging molds. Decades of experience, cutting-edge technological research and all-round expertise in the relative technologies and processes ensure SACMI is able to deliver complete, customized solutions, whatever the production requirement.

Molds for compression and injection presses

SACMI presses - whether compression or injection - feature molds that are precision-designed to maximize efficiency, reliability and finished product quality. Our team of experts works in close contact with customers to develop tailor-made solutions, optimize production processes and reduce cycle times.

SACMI compression press molds are particularly appreciated for their durability and capacity to maintain high production standards, even in the harshest manufacturing environments. Similarly, injection press molds are designed to ensure excellent, long-lasting dimensional stability and precision.

Outstanding thermal efficiency with COOL+

SACMI's COOL+ system is revolutionizing thermal control of molds, on both compression and injection presses.

COOL+ uses a pioneering cooling system that ensures excellent heat dissipation, improving the quality of the finished product and significantly reducing cycle times.

• Compression press molds: COOL+ lets you significantly lower the temperature of the produced cap, minimizing dimensional shrinkage. This results in a shorter cycle time, a significant increase in productivity and a dimensional stability that ensures secure application on the bottle.

• Injection press molds: COOL+ injection molds offer precise, reliable and effective thermal control. COOL+ post-cooling technology optimizes process times, enhances the dimensional stability of the preforms and integrates smoothly with the PVS156 sample inspection system, incorporated inside the press itself: a feature that only SACMI offers, thanks to its unmatched understanding of production processes and preform quality control.

Pioneering hot runner solutions driving the future of automotive trends

Oerlikon HRSflow brings comp-rehensive expertise in managing In-mold color technology across various materials

Color in the automotive industry goes beyond aesthetics; it can shape consumer behavior, strengthen brand identity, and even influence vehicle purchasing decisions. As plastic part design continues to evolve and sustainability becomes an increasing priority, the challenges in injection molding grow. In response, In-mold color technology offers a cost-effective and high-quality solution, providing a brilliant and durable finish without the added costs or environmental impact of traditional painting methods.

This advanced manufacturing technique incorporates pre-colored plastic resins directly into the injection molding process. Oerlikon HRSflow brings comprehensive expertise in managing In-mold color technology across various materials such as PP, TPO ABS and PC-ABS. The optimized thermal profile of the channels together with an optimized nozzle and tip geometry ensure a smooth, direct injection on the part, producing finished components in the desired color and appearance in just one step. With this approach, secondary processes like painting or plating are eliminated, speeding up production and making parts easier to recycle. Additionally, scrap is significantly reduced, lowering both the overall cost of production and the environmental impact.

This technology is versatile and can be applied across a wide range of automotive applications, such as exterior parts (i.e. bumper, wheel arch, spoiler…) as well as internal one (IP, central console, door panel).

An innovative look for automotive front panels

At Fakuma 2024, Oerlikon HRSflow unveiled the newly designed Mercedes EQB Star Panel. Featuring a high-gloss black surface decorated with a star pattern, this fresh design aligns perfectly with the future needs of the automotive industry. The molded part, weighing 920 g and measuring 2.5 mm in thickness, is crafted from PC/ABS BayblendT65 xf and produced using Oerlikon HRSflow's sequential hot runner system, consisting of 1 drop Ga and 6 drops Ha series. This optimal hot runner solution guarantees the component's impeccable appearance, meeting

Picture: Oerlikon HRSflow

the rigorous standards of the vehicle's advanced features. Furthermore, the hot runner system includes specialized gate inserts that minimize maintenance and enhance efficiency, boosting overall productivity.

The project was conceived in cooperation with Gerhardi.

New *Horizons* for the Lighting Industry

At the booth, Oerlikon HRSflow showcased several advanced appli-cations, including the Head Lightbar for the automotive sector, crafted from crystal-clear polycarbonate (PC) and produced using the innovative FLEXflow HRS hot runner system technology. This application, provided courtesy of Automotive Lighting, demonstrated the precision and innovation driving the industry forward.

FLEXflow HRS technology, powered by servo motors, enables perfectly synchronized pin management, delivering exceptional flow front accuracy in sequential injections. This advanced solution minimizes sudden pressure drops, ensuring more uniform cavity filling and reducing stress on the plastic components.

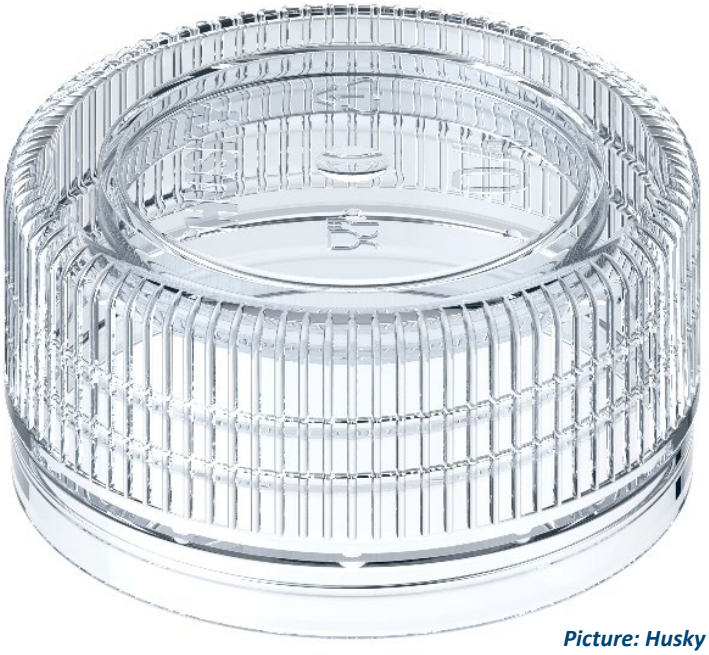
This flexibility is not limited to the filling phase alone; during the holding phase, needle profiles (including speed and stroke) can be individually adjusted to meet specific product requirements, offering unmatched versatility.

Picture: Husky

Husky's PET closure wins Packaging Europe Sustainability Award, advancing circularity in beverage packaging

Husky Technologies™, a pioneering technology provider enabling the delivery of essential needs to the global community, announces that its groundbreaking PET closure has won the Packaging Europe Sustainability Award in the Driving Circular Economy category. This award, presented at the Sustainable Packaging Summit that took place in Amsterdam on November 12, reflects Husky's commitment to enabling true circularity in the beverage packaging industry.

In a market traditionally dominated by two-material bottle-and-closure solutions, Husky's PET closure is set to transform industry standards. By creating a fully PET-based mono-material solution that integrates seamlessly with existing PET recycling streams, Husky is streamlining the material sorting process, reducing environmental impact, and unlocking new efficiencies in recycling and lightweighting.



Picture: Husky

"At Husky, our commitment to enabling the packaging industry to transition from a linear to a circular economy is taken seriously. Winning the Packaging Europe Sustainability Award for our PET closure reflects this commitment to delivering innovative, sustainable solutions that meet global demands for more circular packaging," said Robert Domodossola, Husky's President of Systems and Tooling. "Our PET closure is designed to advance the recyclability and functionality of beverage packaging by providing a mono-material solution that represents a significant step forward for the industry and consumers alike."

Husky's new PET closure is designed to improve both operational and environmental performance of the complete beverage package by enabling:

- Enhanced Circularity: By aligning both closure and bottle materials, the need for multi-material sorting is eliminated, resulting in higher yields of recyclable PET.
- Improved Efficiency: The PET closure's rigid properties enable meaningful reductions in material use and weight, minimizing costs and waste.
- Reliable Performance: Unmatched patented tamper evident forming approach for consumer safety. The capping process is virtually stress-free and yields a lower reject rate.

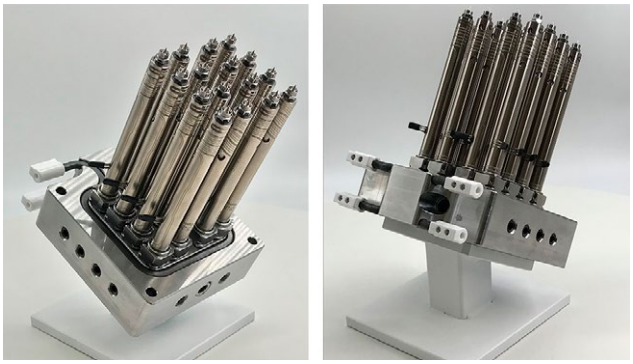
Unveiled earlier this year at NPE 2024 in Orlando, Florida, Husky's PET closure has already garnered strong industry support, with select early adopters preparing for commercial production in 2025. This success reflects Husky's mission to make a positive global impact by driving sustainable innovation in circular packaging.

Mastip Introduces New Close Cavity Solution - MX09 Nozzle Series

Mastip's MX Nozzle Series, well known for its high performance in multi-cavity and hot half systems, has been expanded to include the MX09 nozzle range, which is ideally suited for close pitch cavity systems.

MX09 will be available in H13 Steel (F1), in both front and rear loading configurations, with lengths varying from 55-175 mm.

View the MX09 animation below that illustrates key dimensions including nozzle pocket, sealing diameter and pitching distance making it the optimal solution for manufacturing small parts.



Picture: Mastip

PLA bio-degradable transparent cup

Mold-Masters hot runner system plays critical role in producing the worlds thinnest injection molded 100% bio-degradable transparent cup.

Sanyoshi Lacquerware (Aizuwakamatsu City, Fukushima Prefecture, Japan), a packaging company, was looking to produce a transparent cup made of 100% polylactic acid (PLA). This multi-use cup is biodegradable at the end of its life as PLA converts into water and CO2 in soil when conditions are right.

PLA is typically processed at low temperatures and is a thermally sensitive material. It requires stable temperatures from the hot runner system to process effectively. In addition, PLA is typically a corrosive material that can degrade system components over time. Failure to overcome these limitations often results in processing and part quality issues that can appear as visual defects and discoloration. The additional challenge with injection molding PLA in a thin wall application is that PLA is a difficult material to inject into every corner of the mold due to its high viscosity. Also, using PLA has higher material costs compared to conventional resins.

Mold-Masters Summit-Series hot runner system was selected for its ability to accommodate the materials thermal sensitivities and corrosive characteristics. Summit-Series offers our most precise thermal profile and incorporates more durable higher-grade steel along with special coatings to enhance durability and minimize the effects of corrosion to the system. In addition, to mold thin-walled products, a special internationally patented injection process, held by KOMATSU & ASSOCIATES in Japan, was used which involves dissolving a large amount of supercritical CO2 in the PLA to increase its fluidity. The president, Mr. Michio Komatsu, was awarded Prime Minister's Award of Japan's Manufacturing Grand Award by Mr. Shinzo Abe for his extensive PLA injection technologies and is a technical advisor for Mold-Masters in Asia. Although PLA is more expensive than general-purpose plastics, making it thinner has made it possible to reduce costs by reducing the amount of material used. Costs have been reduced further through mass production. An 8-drop mold creates 8 cups with each cycle which helps increase productivity to lower cost per part and gives them the potential to produce tens of thousands of cups a day with each mold.

The Summit-Series hot runner system in combination with the special patented injection process allowed them to produce a thinner-walled molded part than ever before (0.53 mm). Sanyoshi Lacquerware (Aizuwakamatsu City, Fukushima Prefecture, Japan) now offers a 0.53mm thick transparent cup made of PLA. They claim "0.53 mm is the world's thinnest, thin-walled plastic cup made by injection molding of PLA." Not only are they able to mass produce these cups economically, but when these cups reach their end of life, the thinner wall design allows these cups to compost very quickly. It is said that under the ideal conditions, these cups can fully decompose within 30 days. PLA thin-walled cups molded using this technology are expected to go on sale in the summer of 2024 under the brand name "IZ EARTH".

"Mold-Masters Summit-Series hot runner system played a critical role in allowing us to push the boundaries of what's possible in this application," emphasized Mr. Komatsu. *smi*

Picture: Mold-Masters

High-grade cosmetics packaging produced sustainably and efficiently

At Thomriss in Brazil, injection molding technology from WITTMANN meets stringent precision requirements.

Design is his passion, and the products show it. Tomaz dos Santos is the owner and CEO of Thomriss, a major Brazilian manufacturer of make-up packaging focusing on eyelash and eyebrow mascaras. His daily challenge: producing high-grade surfaces sustainably at competitive costs. Injection molding system supplier WITTMANN supports this effort with machines, automation, auxiliaries and extensive application technology expertise.

Tomaz dos Santos is particularly proud of the large cleanroom area at the corporate headquarters newly constructed ten years ago in Lençóis Paulista, just under 280 kilometers northwest of the São Paulo city. “Quality is our top criterion”, the CEO explains to us during our visit to the production plant. On the table inside the large, bright conference room, a great variety of packaging items are displayed, such as lipstick cases, eyelash and eyebrow mascaras, make-up jars and dropper bottles for liquid preparations. The company’s product range includes more than 50 different types of packaging. For injection molding production, this is an enormous figure. For it must be remembered that one lipstick and facial stick alone requires more than five different molds, and every product can be ordered in innumerable variants. All products are available in a very broad range of different colors, and with color gradients as well. Many packaging parts are printed on, metallized or painted. The main eye-catchers are the anodized lip gloss and eyeliner packs with their particularly elegant glamor.

Everything from a single source: granulate feeding is handled exclusively by WITTMANN auxiliaries

A total of 44 injection molding machines are up and running and the lion’s share is taken up by servo-hydraulic SmartPower machines from WITTMANN (all photos: WITTMANN)

“This can only be achieved by highly accurate and perfectly clean production”, explains dos Santos. Even the tiniest dust particle or slightest unevenness would be-come clearly visible after metallizing and thus cause scrap. The prerequisite for perfect surfaces is high precision in injection molding. 44 injection molding machines with clamping forces ranging from 120 to 240 tons are installed in the injection molding hall. Nearly all of these are SmartPower machines from the WITTMANN Group. With 65 per cent of all parts produced, injection molding processing takes up the lion’s share of manufacturing activities at the facility.

“The SmartPower injection molding machines offer extremely precise machine movements together with strong dynamism and high efficiency” says Cássio Luis Saltori, Managing Director of WITTMANN BATTENFELD do Brasil. “With these attributes, the series is predestined for use in the particularly price-sensitive production of upmarket cosmetics packaging.”

Their drive-on-demand technology combines fast-responding servo motors with powerful constant displacement pumps to enable extremely fast and simultaneously precise machine movements with minimal energy consumption. The KERS energy recovery system produces an additional energy-saving effect by transforming the kinetic energy from deceleration processes into electrical energy. The power derived from this can then be used for functions within the machine such as barrel heating.

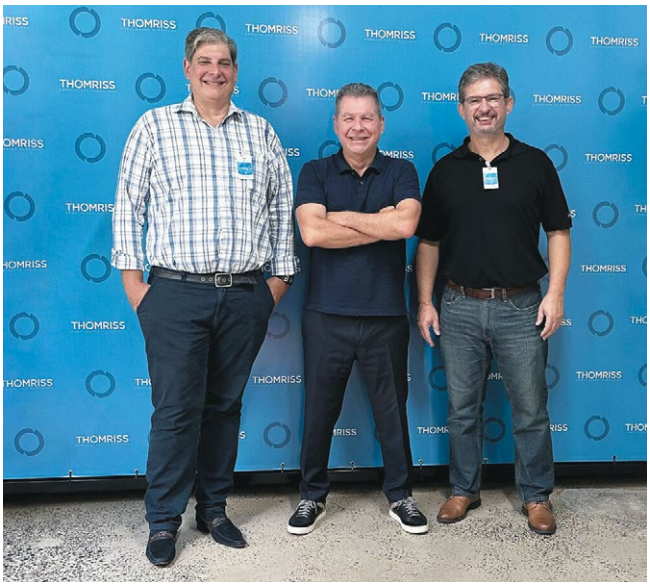
Consistent quality standards to minimize production costs

The cooperation between WITTMANN BATTENFELD do Brasil and Thomriss has long since become friendship. Tomaz dos Santos and Marcos Cardenal from WITTMANN BATTENFELD do Brasil have known each other for 33 years. Tomaz dos Santos founded his company and purchased his first injection molding machines in1990. Although impressed by WITTMANN BATTENFELD from the very beginning, the company first invested in injection molding machines from a Chinese supplier. For cost reasons, according to the CEO. But the quality did not convince him. This is why now only machines from the WITTTMANN Group are admitted to the plant. Due to their extremely high process stability and quality consistency, they have proved less costly in the end. Not to forget: the application technology support given by Marcos Cardenal and Cássio Luis Saltori. “My family always says: Tomaz, your second name is Battenfeld,” dos Santos tells us with a twinkle. “That has almost become a love relationship between me and my technology supplier.”

Since 2008, the Battenfeld brand of injection molding machines has been a part of the WITTMANN Group. WITTMANN is the only supplier on the market able to offer turnkey solutions covering the entire injection molding process, including raw material preparation and feeding, as well as injection molding, automation and mold temperature controlling, inline recycling and digitalization. Tomaz dos Santos fully exploits this advantage for his company. The whole range of auxiliary equipment for drying, handling and dosing of the plastic granulates comes from WITTMANN, as well as the linear robots for demolding and depositing of the molded parts. The automation systems are becoming more and more important for Thomriss in view of the rising quality and efficiency standards.

PET in more and more applications

“WITTMANN is a development partner for us,” dos Santos emphasizes. “Whenever we are facing new challenges, we get together to develop a solution. I can always rely on Cássio and Marcos to find the best possible deal for us.” Such as for the dropper bottle lid with an integrated pipette made of two different materials. TPE is used for the flexible dome, while the screw top consists of polypropylene. Both components are produced in multi-cavity molds and directly assembled at the plant immediately after injection molding. Following extensive testing, the two development partners jointly selected the materials and optimized the process. “With this solution, we are very flexible and inexpensive”, says dos Santos.



Tomaz dos Santos (center) from Thomriss, Cássio Luis Saltori (left) and Marcos Cardenal (right) from WITTMANN BATTENFELD do Brasil have been development partners for many years

The lids of the dropper bottles consist of two components: TPE and PP; Thomriss and WITTMANN BATTENFELD do Brasil developed this packaging solution in close cooperation

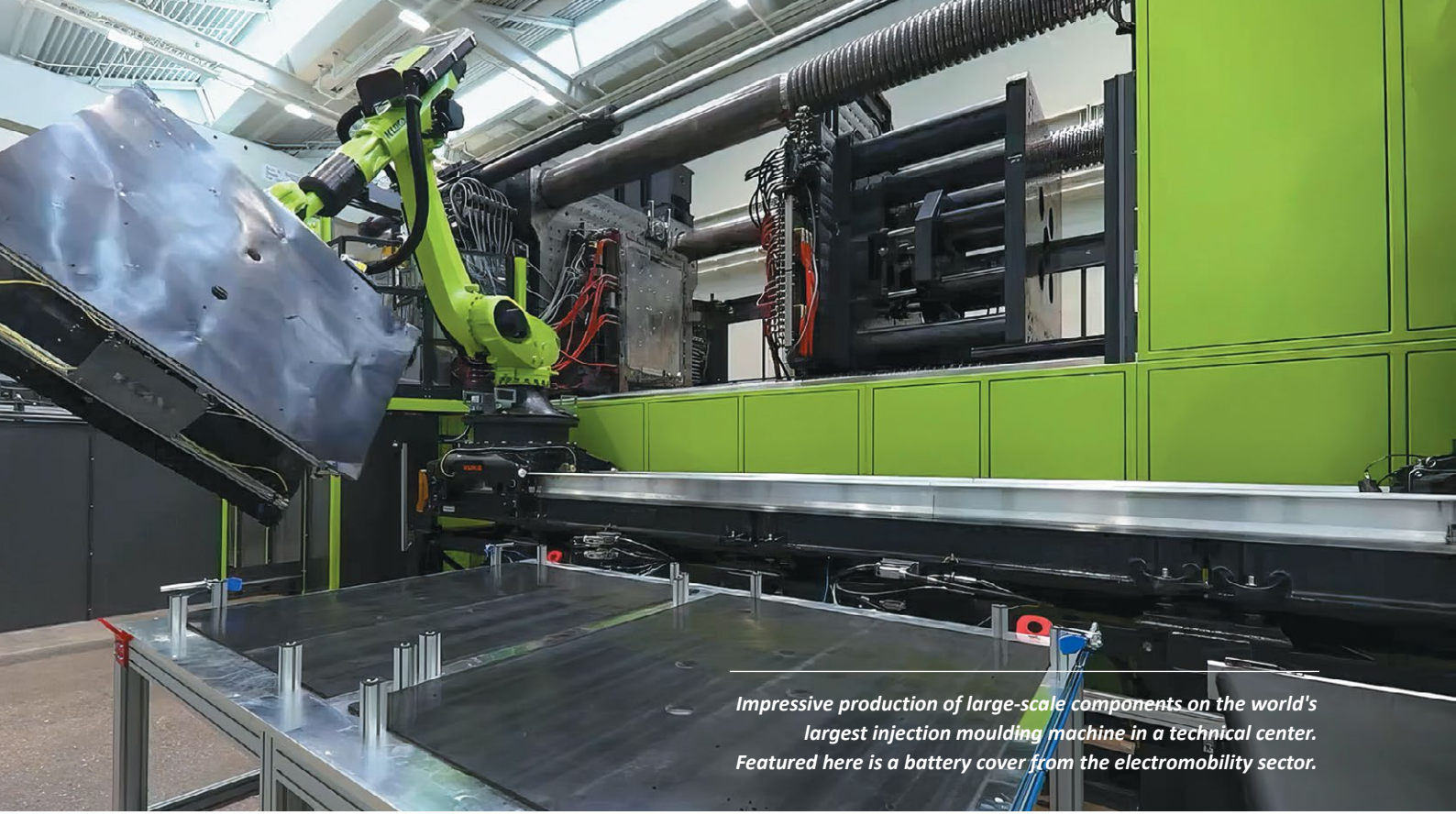
Wherever permitted by the required functionality, Thomriss follows a strict mono-material strategy. “Sustainability ranks very close to the top of our customers’ priority list. In the cosmetics sector, sustainability of the packaging is an important purchasing argument”, explains dos Santos.

This is precisely why a material which is relatively new for Thomriss is rapidly entering its product portfolio: PET. “PET has many advantages. Packaging items made of PET offer transparency, high rigidity and durability. The decisive factor for us, how-ever, is recycling. For this material, a closed cycle already exists. So, we design more and more packaging items to be made of PET and go the PET way in high-volume applications as well.”

Among the products displayed on the conference table, we find several specimens of innovative cosmetics packages consisting of PET and recycled PET. For example, lip gloss packs, which are running off the clock-out belt of a SmartPower machine on the day of our visit, and which we meet for a third time shortly afterwards in the clean room for surface finish. ***smi***

Author: Susanne Zinckgraf, Head of Strategic Marketing, WITTMANN Group

WITTMANN Group
www.wittmann-group.com



Impressive production of large-scale components on the world's largest injection moulding machine in a technical center. Featured here is a battery cover from the electromobility sector.

Battery Innovation Day dazzles with the ENGEL duo 5500 combi M

ENGEL and SABIC, at the St. Valentin technical center during Battery Innovation Day, showcased innovative solutions for electromobility together with leading partners from the plastics and automotive industries in the end of 2024. The highlight was the powerful duo 5500 combi M, a two-platen injection moulding machine, setting new standards in versatility and technological innovation.

Innovations for Electromobility

At the Battery Innovation Day, ENGEL demonstrated the manufacture of an innovative battery cover made of long glass fibre reinforced polypropylene from SABIC. The dimensions of the component, 1.77 x 1.30 meters, underscore the potential of the duo 5500 combi M for large-scale applications. The lid, developed in cooperation with partners, offers up to 30% weight reduction and a significant reduction in CO_2 emissions by up to 40% compared to conventional metal solutions.

The use of composite sheets and thermoplastic materials allows for an efficient combination of stability and cost-effectiveness, integrating functionality directly in the injection moulding process, thus minimising material use and post-processing.

The duo 5500 combi M: XXL Technology with Automation

With a clamping force of 55,000 kN, the duo 5500 combi M is the largest injection moulding machine in a technical center worldwide. Its automation capabilities through the use of easix articulated arm robots enable precise process sequences such as the placement of composite sheets and the removal of finished components. This integration ensures maximum productivity and process consistency.

Technologies in Focus

The duo 5500 combi M offers a wide range of technologies that revolutionise the manufacturing process for large components:

- optimelt: Production of high-quality optical components from transparent plastics, ideal for headlights.
- foilmelt: Integration of decorative or functional films directly in the injection moulding process.
- clearmelt: Coating of visible parts with polyurethane directly in the injection mould for painted or decorative surfaces.
- coinmelt: Injection compression moulding for components with thin wall sections and high optical requirements.
- foammelt: Production of light, low-warpage, foamed components with optimised material use, particularly suitable for parts requiring low weight yet high stability.

The knowledge transfer from ENGEL and its partners at Battery Innovation Day was highly acclaimed by an international audience. (All photos: ENGEL)

• organomelt: Combination of thermoplastic composite materials with the injection moulding process, creating strong yet lightweight and functional components, playing a key role in innovative lightweight solutions in the automotive industry.

Collaboration for Sustainable Solutions

The Battery Innovation Day was the result of close collaboration between ENGEL and renowned partners:

- SABIC: Event partner and material supplier for the long glass fibre reinforced polypropylene.
- Forward Engineering: Simulation-based development and load testing.
- Siebenwurst: Expertise in tool making.
- Ensinger: Supply of thermoplastic composite materials.
- Freudenberg: Pressure relief solutions for battery housings.
- DuPont: High-performance materials ensuring thermal and mechanical stability.

Conclusion: A Milestone for the Industry

The Battery Innovation Day impressively demonstrated how ENGEL, together with its partners, is shaping the future of electromobility. The duo 5500 combi M enables cost-effective production of large, stable, and lightweight components through innovative technologies and advanced materials. ENGEL thus reinforces its leadership role in injection moulding technology and sets new standards for the entire automotive industry - embodying the motto: be the first.

About ENGEL AUSTRIA GmbH

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

The savings in weight, CO_2 emissions, and cost efficiency were illustrated at the Battery Innovation Day by ENGEL with numerous examples. Here, the finished battery cover.

Sincere collaboration to elevate liquor packaging

Haitian injection molding machines are integral to HICAP's operations, powering its six nationwide bottle cap production bases. The stable performance of over 200 Haitian IMMs demonstrates the depth of this partnership.

Founded in June 2000, HICAP AIoT Group has grown over its 24-year journey into a leader in bottle cap packaging for China's liquor industry. The company focuses on providing high-quality packaging solutions for renowned liquor brands. With six production bases across China, HICAP serves as a trusted partner to China's most prestigious liquor enterprises.

HICAP Huai'an, established in March 2022, spans an area of about 40,000 square meters with a Phase 1 facility covering 27,000 square meters. Featuring fully enclosed dust-free workshops, state-of-the-art production equipment, intelligent logistics systems, and efficient information systems, it stands as a benchmark for smart packaging factories.

Collaboration – Tech & Trust

Since 2007, HICAP Group and Haitian Plastics Machinery have embarked on a collaborative journey founded on technology and trust. Haitian injection molding machines are integral to HICAP's operations, powering its six nationwide bottle cap production bases. The stable performance of over 200 Haitian injection molding machines demonstrates the depth of this partnership. At the Huai'an facility alone, 96 Haitian machines are planned for deployment, with 39 already operational. The factory is scaling up production capacity to cater to leading liquor and beverage clients across East and North China.

Performance – Quality & Efficiency

Mr. Li Tao, Vice President of Operations at HICAP, has highlighted that Haitian's injection molding solutions meet HICAP's rigorous standards for high-quality cap production through stable performance, high efficiency, and precise processing capabilities. The machines deliver low failure rates during continuous operation, ensuring high production efficiency. This reliability reduces costs and enhances operational flexibility, saving valuable time and resources for HICAP.

All pictures: Haitian

Additionally, Haitian's advanced technology and precise control systems ensure each liquor bottle cap meets stringent dimensional and shape requirements. This unwavering commitment to quality ensures the caps' sealing integrity and aesthetic appeal, helping HICAP secure market share and customer trust in a highly competitive industry.

Service – Power of Partnership

Beyond exceptional performance, Haitian Plastics Machinery has earned HICAP's acclaim for its superior service. During trial production, Haitian's after-sales team provided timely support, solving production challenges and ensuring seamless operations. This customer-centric approach reinforces HICAP's confidence in Haitian as a long-term partner.

Digitalization – Trends of industry

As the era of digitalization, HICAP and Haitian's partnership is poised to seize new opportunities. HICAP aims to enhance the digital intelligence of its equipment, striving for seamless integration with its internal information systems. Haitian Smart Solutions is responding to this need, offering intelligent, automated one-stop solutions to help HICAP achieve greater breakthroughs in cap packaging.

Tech is the Future

Over the past decade, HICAP Group and Haitian Plastics Machinery have shared a vision of excellence fueled by their pursuit of cutting-edge injection molding technology and superior quality. Each technical collaboration has driven advancements in both quality and innovation, meeting the market's demand for premium packaging products. ***smi***

Haitian
www.haitianinter.com

HASCO developed new French monocoupling system

As a pioneer of mouldmaking with over 50 years of experience in the field of cooling technology, HASCO supports tool- and mouldmakers worldwide in the efficient cooling of injection moulding tools. By extending the product portfolio with the new monocoupling system with French profile, HASCO offers even more service for its international customers.

Modular system for maximum flexibility

The new monocoupling system Z 800550ff/... is noted for its blocking function on one or two sides, thereby offering maximum flexibility to meet the demands of precise and efficient mould cooling.

Optimised flow rates and ergonomic operation

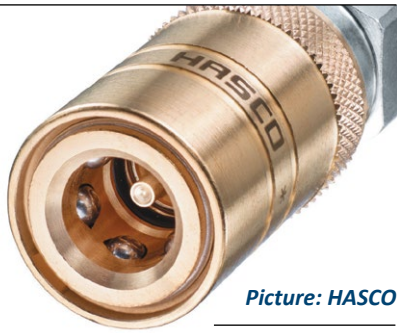
A special feature of the new French system, which is available in the sizes 9 and 13, is offered by the special valve technology, which guarantees a minimum flow resistance. Excellent flow rates, which are up to 30% above the usual standard on the market, increase the performance and ensure more efficient cooling, a reduction of the downtimes and an increase in overall productivity. A further highlight is the ergonomic one-hand operation, which considerably facilitates and speeds up the coupling and separation of cooling circuits.

High-grade materials, a variety of connection options

When developing its monocoupling systems, HASCO opted for high-grade sealing materials that guarantee excellent temperature resistance. The system is designed for use at temperatures of up to 150°C for water and up to 200°C for oil. Apart from that, the imperial cylindrical outer threads are equipped with an additional sealing ring to ensure safe and reliable sealing. The monocoupling system also offers variable connections, including inner thread, outer thread and bushing, which enables a high level of adaptability to different cooling circuits.

Comprehensive cooling programme for modern mouldmaking

HASCO offers the most comprehensive range of products for cooling in mouldmaking, extending from nipples and couplings to bushings and hoses. The exceptional diversity of combination possibilities within the range opens up future-oriented solutions for all tasks in cooling technology. With the launch of the French monocoupling system, HASCO is extending its portfolio and ensuring that customers worldwide can have access to the latest and most efficient technologies. **smi**



Picture: HASCO

HASCO
www.hasco.com

Progressive introduced new runner components

Progressive Components has added new runner components with the introduction of a Gate Insert and Runner Turn Off as standardized items for controlling a mold's runner system.

Progressive's new Gate Insert offers a compact, off-the-shelf solution to address the issue of abrasive materials opening gates. Gate Inserts are serviceable from the parting line, can be replaced, and provide an option to adjust gate size without re-EDM'ing the gate diameter.

Progressive's Runner Turn Off (RTO) provides a reliable method to block or redirect material flow within the runner, which is especially common with family mold tooling. The RTO offers precise, click-in-place positioning at 45° increments and is conveniently held during the machining of the pre-hardened 420 SS assembly, which is then located into position with a press fit flat. RTOs are available in styles both with and without a center ejector pin.

Gate Inserts and Runner Turn Offs may be used together or independently, as required by the mold's design. **smi**

Progressive Components
www. procomps.com

As part of the igus:bike world tour, the plastic bicycle has already visited numerous igus customers, projects and sights throughout Germany – from the Brandenburg Gate to passenger boarding bridges at Frankfurt Airport (all photos: igus GmbH)

igus:bike world tour: plastic bicycle braves the elements

Lubrication-free and low-maintenance bicycle made from recycled plastic has already covered 365 km through Germany.

On the occasion of igus's 60th anniversary, the igus:bike has now been travelling across Germany for 37 days and has visited numerous customers, projects and sights along the way. From the Brandenburg Gate in Berlin to the iMSPO shore power system at Hamburg harbour and passenger boarding bridges at Frankfurt airport to Neuschwanstein Castle in the foothills of the Alps. The bicycle made of recycled plastic is intended to sensitise people to the topic of the "circular economy of plastics" and show how robust and durable igus motion plastics are – both in the igus:bike and in various customer applications.

The first stages of the world tour have been completed. The bike made from recycled plastic has already travelled 365km across Germany since it started. Both passers-by and igus customers were amazed when they saw the orange, futuristic-looking vehicle for the first time. However, the urban bike is not only intended to impress with its design. It is the first bike suitable for series production that is made from recycled plastic – for example from discarded fishing nets that have been drifting through the oceans worldwide for hundreds of years, contributing to plastic pollution. The project thus shows how plastic waste can become a valuable resource for urban mobility, helping combat the global flood of plastic.

From Germany through other countries

The world tour kicked off on 15th October in the new igus factory building in Cologne. Since then, the igus:bike team has been travelling through Germany to introduce industry partners, consumers and media representatives to a new form of mobility that is fun and also protects the environment. Right at the start of the world tour, for example, the bike stopped at the RheinKrake. This Cologne-based association has installed a floating rubbish trap in the Rhine near

the Zoobrücke, which holds back several tonnes of rubbish every year to prevent it from ending up in the Wadden Sea nature reserve. The motion plastics specialist uses some of this waste as raw material for the plastic bicycle. After this visit, the igus:bike team hit the road to reach further exciting destinations: the Veltins Arena in Gelsenkirchen, for example, where RHENAC GreenTec AG uses energy chains from igus in its lawn-lighting system to protect the outdoor facility's energy and data cables from UV radiation, rain and temperature fluctuations. Or the Eurogate Container Terminal at the Port of Hamburg, where the igus Mobile Shore Power Outlet supplies container ships with shore power quickly and flexibly. And of course cycling through the Brandenburg Gate in Berlin was a must. The bike is now crossing the German border, making its way to the next stage: Singapore. The urban bike makes is stopping in various countries around the world, including Austria, Italy, Spain, the USA and Japan. It will cover 6,000km during the tour and prove how robust the high-performance plastics from igus are.

igus:bike went into series production under the name RCYL

Many engineers will also be able to discover new things on the bicycle's journey around the world. As a pioneer, igus has done a lot of development work to make the first bicycle made from recycled plastic ready for series production. Material experts have developed a plastic compound that is both robust and lightweight and now allows a recycling rate of over 50% – with an upward trend. In addition, production techniques such as injection moulding and rotary casting have been combined in such a way that, with the exception of individual components like the disc brakes, almost all bicycle components can now be manufactured from plastic: not only the frame, the seat post and the brake levers, but also the drive unit, which was long considered technically unfeasible in the industry. Last but not least, the challenge was to achieve a realistic sales price, which has now been achieved. The bike is available under the name RCYL.

ABOUT igus:

igus GmbH develops and produces motion plastics. These lubrication-free, high-performance polymers improve technology and reduce costs wherever things move. In energy supplies, highly flexible cables, plain and linear bearings as well as lead screw technology made of tribo-polymers, igus is the worldwide market leader. The family-run company based in Cologne, Germany, is represented in 31 countries and employs around 5,000 people across the globe. In 2023, igus generated a turnover of €1,136 billion. Research in the industry's largest test laboratories constantly yields innovations and more security for users. 243,000 articles are available from stock and the service life can be calculated online. In recent years, the company has expanded by creating internal startups, e.g. for ball bearings, robot drives, 3D printing, the RBTX platform for Lean Robotics and intelligent "smart plastics" for Industry 4.0. Among the most important environmental investments are the "chainge" programme – recycling of used e-chains - and the participation in an enterprise that produces oil from plastic waste. **smi**

igus
www.igus.eu

All pictures: INTRAVIS

CapWatcher Compact: Big on quality. Small in footprint.

The new INTRAVIS' CapWatcher Compact combines a sorting, feeding and inspection unit for the quality control of plastic closures in a single, compact solution. Based on many talks with the customers, the system addresses one of the largest problems in modern production facilities – the availability of space! The CapWatcher Compact saves up to 50% of the floor space compared to conventional solutions and simultaneously maintains INTRAVIS' renowned commitment to quality.

Efficiency and precision in a limited space

Manufacturers of plastic packaging are increasingly faced with the challenge of fitting more and more production capacity into limited space. This is where the new INTRAVIS' CapWatcher Compact comes into play: It combines three previously separate elements of the plastic closure production line – sorting, feeding and inspection – in one compact housing, without compromising on functionality or inspection quality.

"With the CapWatcher Compact, we have created a solution that takes our customers' production realities into account. We offer a reliable 100% inspection with minimal space requirements," explains Marius Pötting, our Product Manager Caps & Closures.

Development in dialog with the customer

The impetus for the development of the CapWatcher Compact came from customer requests over the last year. "During the last year, some of our customers came to us and said that in the future it will be more difficult for them to use our solutions, since the space in their production lines will be more and more limited. They were very sorry for that since they appreciate our sophisticated systems", explains Marius. That was the moment INTRAVIS' specialists realized that there is a requirement to enable the proven inspection performance in a significantly smaller space.

Within six months, INTRAVIS development department created an initial prototype. However, it quickly became clear that simply reducing the footprint of the inspection unit would not provide the necessary space savings. Only by combining several downstream elements, the necessary reduction in space requirements would be achieved. So, in a second project phase, INTRAVIS developed and implemented an integrated sorting and feeding technology and finally brought the system to market maturity.

"Of course, it helped that we have been developing and building feeding solutions for plastic closures ourselves for many years in addition to vision inspection systems," says Marius. As a result, the system now has a footprint of just 2.4 m^2 (25,8 ft^2) and therefore offers nearly the same inspection performance in half the space of a conventional setup.

Technical highlights of the CapWatcher Compact

INTRAVIS' CapWatcher Compact offers numerous technical functions that make it a sophisticated solution for inline plastic closure inspection:

- Integrated hopper and conveyor technology: The integrated hopper offers a capacity of up to 140 liters (37 gal). The feeder uses the familiar waterfall principle to efficiently transport closures into the inspection section.
- Comprehensive quality assurance: In addition to the standard modules for inner and outer closure inspection, unique and market-proven modules for micro hole inspection and cavity number reading are implemented. The top wall inspection (e.g. for inspecting prints for contamination etc.) is also available as an option.
- High speed: With an inspection performance of up to 40 closures per second, the system meets high-speed requirements.
- Second ejector: Despite the limited space, a second ejector is integrated, which can be used for sorting out quality shots or blacklisting, for example.
- Wide product range: The CapWatcher Compact is designed for the inspection of common CSD closures as well as tethered caps.
- Product-specific settings: The electrically adjustable jet height is saved for each product, and it automatically adjusts when changing products.
- Fault and jam detection: The system automatically recognizes (by implemented sensors), when faulty molded closures become jammed, and localizes the position precisely. This ensures uninterrupted and fluent production.
- Ease of maintenance: Despite the compact construction, the design allows easy access to all components thanks to doors on all sides.

To complete the downstream equipment, customers only need a cooling conveyor and a packaging unit in addition to the CapWatcher Compact – The whole periphery can be obtained from us as a turnkey supplier, of course.

Solution for modern production requirements

With its compact design, INTRAVIS' new CapWatcher Compact addresses one of the most urgent problems in the industry: Limited space in production halls. Particularly in Europe, attempts are being made to produce more and more in the same or smaller space. With the integration of sorting, feeding and inspection into one unit, the company now offers a space-saving and efficient solution.

"The CapWatcher Compact shows how important it is to adapt flexibly to the needs of customers. It is yet another example of how we at INTRAVIS see ourselves as a partner to our customers. We are always ready to take on new challenges. With the CapWatcher Compact, we are proud that we have created again great value for our customers as well as our industry in general," summarizes Marius Pötting.

Turnkey solutions since 1993

INTRAVIS GmbH was founded by Dr. Gerd Fuhrmann in 1993 and has been growing steadily ever since. Today the company is one of the world market leaders for vision inspection systems for the plastic packaging industry. INTRAVIS develops and delivers turnkey inspection systems for producers of closures, bottles, preforms, thin-wall containers and decoration. This means, the company not only manufactures vision systems but also develops vision inspection software in house at the headquarters in Aachen, Germany. *smi*

INTRAVIS
www.intravis.com

Photo: BASF

The world's first biomass-balanced polyethersulfone

With Ultrason® E 2010 BMB, fossil feedstock is replaced with renewable alternatives from waste-based resources and attributed to the product via a certified biomass balance approach.

To all industries relying on high-performance thermoplastics, BASF is now offering the world's first biomass-balanced polyethersulfone (PESU). Ultrason® E 2010 BMB contributes to substituting fossil resources, reducing greenhouse gas emissions, and increasing the use of renewable feedstock. This unique PESU enables customers in industries as diverse as household and catering, automotive, electrics and electronics (E&E), healthcare as well as water and sanitary to differentiate their products from the competition. It also helps them to achieve their sustainability goals - all without compromising on the material's performance, quality or the need to invest extra money into new processing lines.

For biomass-balanced (BMB) Ultrason® E 2010, fossil raw materials are replaced by renewable feedstock at the beginning of production. The renewable feedstock comes from organic waste: the corresponding amount is attributed to the Ultrason® grade via a mass balance approach which is certified according to ISCC PLUS. The resulting BMB grade has a lower product carbon footprint (PCF) compared to the standard BASF material by using renewable feedstock and 100% green electricity in a resource-efficient process in the production plant in Ludwigshafen, Germany. BASF also offers its Ultrason® customers transparency by providing PCF data to support them in evaluating the PCF of their own products. This benefits many applications used in daily life like reusable bottles for adults and babies, microwave dishes and appliances, but also automotive fuel parts, medical devices, E&E connectors and consumer electronics.

In addition to these sustainability advantages, Ultrason® E 2010 BMB is a drop-in solution: The BASF PESU is identical to the standard grade in properties, quality, and certification for e.g., food and water contact. As a result, customers do not have to re-qualify their applications made of Ultrason® E 2010 BMB or adapt their existing manufacturing processes for injection molding or extrusion: They can rely on the same high performance to which they are accustomed to. "BASF is the first company to offer biomass-balanced polyethersulfone", says Erik Gubbels from Global Business Development Ultrason® at BASF. "With this addition to our innovative Ultrason® portfolio we want to enable our customers' green transformation towards more circular solutions – and this as early as possible on their journey to meet their sustainability targets." 50% of the fossil raw materials required for the manufacturing of Ultrason® E 2010 are replaced by ISCC PLUS certified bio-circular feedstocks which results in an attributed amount of 39% to the final Ultrason® E 2010 BMB grade.

Reliable calculation and third-party certification for proven lower PCF

BASF has developed a digital application to calculate the cradle-to-gate PCFs for its sales products, including Ultrason®. The PCF comprises all product-related greenhouse gas emissions that occur until the BASF product leaves the factory gate: from the purchased raw material to emissions from operations and the use of energy in production processes. Options for reducing PCF include the usage of green electricity in the production or attributing renewable materials via a biomass balance approach. ***smi***

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Polyplastics launches new eco-friendly PLASTRON® LFT and DURAFIDE® PPS

The company is developing new grades made from recycled PP and PPS resin that can further mitigate carbon footprint levels while also expanding its portfolio of PLASTRON® LFT products to meet growing market needs.

Polyplastics has launched PLASTRON® LFT (Long Fiber-Reinforced Thermoplastic) RA627P, an eco-friendly composite of polypropylene (PP) resin and long cellulose fiber which delivers low density, high specific rigidity, high impact strength, and excellent damping for a range of applications including audio components (speaker diaphragms) and housings of industrial components.

The development of PLASTRON® LFT RA627P reinforces Polyplastics' commitment to reduce the environmental impact of its materials and bring about a sustainable society. Thanks to its regenerated cellulose fiber content, PLASTRON® RA627P boasts a reduced carbon footprint – roughly 30% less than that of 30% short glass fiber-reinforced PP resin. The new LFT is a composite of PP resin and uninterrupted 30% long cellulose fibers of the same length which are oriented in the same direction. The regenerated cellulose fiber exhibits high strength and elasticity thanks to unique spinning conditions and polymerization of the raw cellulose materials.

PLASTRON® RA627P provides roughly 10% lower density than 30% short glass fiber-reinforced PP resin, while maintaining roughly the same flexural modulus. The material also has a specific rigidity that is higher than that of 30% short glass fiber-reinforced PP resin, with a large loss coefficient at the same time.

The properties of high specific rigidity and large loss coefficient typically have an inverse relationship, but PLASTRON® RA627P offers an excellent balance of these properties, making it suited for audio equipment components such as speaker diaphragms which require this balance.

Polyplastics has also announced plans to launch a 40% glass-reinforced grade of DURAFIDE® rG-PPS by December 2025 as

All pictures: Polyplastics

part of its mechanical recycling business. The company will develop high-quality optimum formulations which will play a role in helping achieve 100% circularity of engineering plastics by expanding the applications of mechanically recycled materials.

The first iteration of Polyplastics' mechanical recycling business calls for collection of glass-reinforced PPS scrap from customers through an open post-industrial recycling (PIR) mechanical recycling scheme. The PPS scrap will be used as a raw material to make DURAFIDE® rG-PPS, which will be launched this year. In initial processes, strict acceptance inspections will be conducted and metal will be removed. In later processes, recycled materials and some virgin materials will be reformulated to meet target specifications. The materials will undergo the same quality standards as that of virgin materials.

The open PIR scheme will help customers reduce and effectively use waste and also significantly reduce carbon emissions for their products. For now, the raw material from customers will be specific grades of DURAFIDE® glass-reinforced PPS.

Polyplastics will develop a higher filled grade as the second iteration of DURAFIDE® rG-PPS. The company will establish a system to supply that grade and the 40% glass-reinforced grade to customers in Japan. The re-compounding business and institution of the open PIR system requires applications as well as establishment of collection routes. The company seeks to collaborate with its customers as well as companies in the recycling and industrial waste treatment industry.

In the future, Polyplastics will build a "local production for local consumption" recycling chain within each geographic region. **smi**

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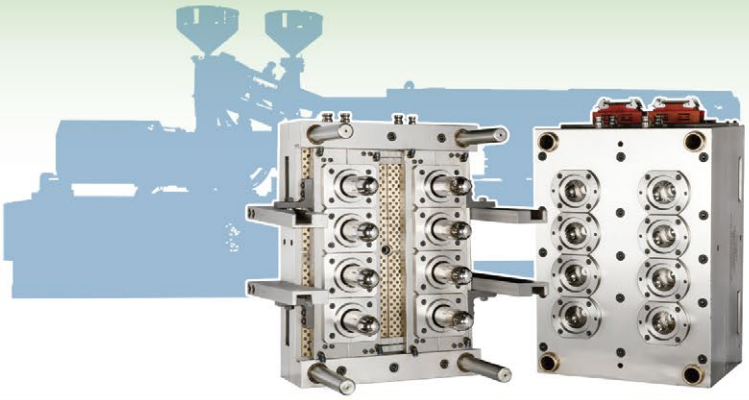

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