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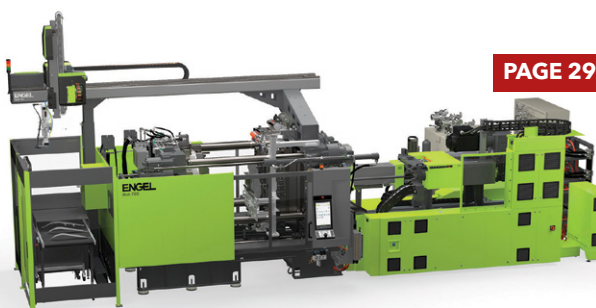
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CONTACT US

AMI

Ground Floor, One Brunswick Square,
Bristol, BS2 8PE, United Kingdom
Tel: +44 (0)117 924 9442
www.amiplastics.com

www.twitter.com/plasticworld
Registered in England No: 2140318

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EDITORIAL

Editor-in-Chief: David Eldridge
david.eldridge@amiplastics.com

Editor: Lou Reade
lou.ream@amiplastics.com

Senior Staff Writer: Chris Saunders
chris.saunders@amiplastics.com

Events and Magazines Director: Andy Beevers
andy.beevers@amiplastics.com

ADVERTISING

Advertisement Manager: Claire Bishop
claire.bishop@amiplastics.com T/ +44 (0)7905 848744

Head - Business Development: Paul Beckley
paul.beckley@amiplastics.com T/ +44 (0) 117 311 1529

Advertising Sales (China/Hong Kong): Maggie Liu
maggie.liu@ringiertrade.com T/ +86 13602785446

Advertising Sales (Taiwan): Ms Sydney Lai
sydneylai@ringier.com.hk T/ +886-913625628

Advertising and Expo Sales (India): Yogesh Vyas
yogesh@exhibetter.com T/ +91 9920735930

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Pollmann shuts Vitis site and transfers machinery

Austrian automotive supplier Pollmann has begun relocating its Vitis production site to nearby Karlstein.

This is because the company is closing operations at Vitis – in the face of an automotive industry downturn – and will concentrate production in Karlstein and at its plant in the Czech Republic.

It says it will retain all 71 employees from Vitis.

"Pooling our production capacities at two locations is the only reasonable step," said Stefan Pollmann, managing director of Pollmann.

In June, Pollmann moved an automated 500-tonne injection-moulding housing production line. It is now



IMAGE: POLLMANN

Pollmann: "Pooling production capacity at two locations is the only reasonable step"

running in a three-shift operation with an overall equipment effectiveness (OEE) of over 90%, says the company. In July, two more lines – which make door-lock housings – were moved. In parallel, Pollmann has

moved a production line to the Czech Republic. So far, around 95 tonnes of machinery and other equipment has been relocated. More will be moved in September, with the operation scheduled for completion in early November.

"Current market fluctuations affect the entire industry, but instead of waiting for conditions to stabilise on their own we are taking a different path," said Pollmann.

Once the move is complete, Pollmann plans to sell the Vitis site – and discussions with potential industrial buyers have already begun, says the company.

➤ www.pollmann.at

OPMobility sees flat sales in H1

Tier One auto supplier OPMobility saw flat sales in the first half of the year

The company posted sales of nearly €6 billion for the period, down around 0.4%. At the same time, profit (EBITDA) rose nearly 10% to €516m.

It said that the impact of tariffs on production volumes was limited, as many of its locations are "in close proximity to its customers' sites".

"We achieved solid earnings in the first half of the year," said Laurent Favre, CEO of OPMobility.

In its main markets, sales in Exterior & Lighting fell 3% to around €2.7bn, Modules rose around 8% to €1.9bn and Powertrain dipped nearly 3% to €1.3bn.

In terms of regions, it saw a 4% improvement in Europe, a 9% dip in North America and a near-12% growth in Asia – driven mainly by a 21% growth outside China. (Growth within China was restricted to nearly 2%.)

➤ www.opmobility.com

Compound boosts prosthetic

Ottobock, which develops prosthetics to restore mobility, has used a special bronze-filled polymer from Lati in a plastic bushing that enables smooth knee flexion.

The compound, called

Latimass SP11 RS-11 D040, is based on PA11 and heavily filled with bronze spheres.

The chemical and physical nature of PA 11, combined with the properties of the metal particles,

allows injection moulding of bushings with high self-lubrication properties and wear resistance.

The bushings need to have a service life exceeding three million cycles.

➤ www.lati.com

Polytec results creep ahead in first half of year

Polytec has posted improved results for both sales and profits in the first half of the year.

Sales rose to nearly €356 million, up just over 2%, due mainly to higher tooling and other engineering sales revenues. While profit (EBIT) rose more than 50%, it ended at less than €6m.

In its Passenger Cars & Light

Commercial Vehicles segment, sales grew nearly 6% to €270m. Sales in the Commercial Vehicles business were flat at around €50m. In the Smart Plastics & Industrial Applications segment, sales fell nearly 15% to around €37m.

Staff costs for the period fell 2.5%, due to a smaller headcount. The company also plans to close its

Weierbach plant in Germany in April 2026 and make further staff reductions. On 30 June 2025, it had around 3,600 employees compared with 3,900 one year previously – a reduction of 8%.

The company estimates full-year sales of €650m-700m in 2025 – compared to €678m in 2024.

➤ www.polytec-group.com

Exports help Haitian increase machine sales in first half

Machinery maker Haitian increased sales in the first half of the year due mainly to a strong export performance.

In H1 2025 it raised sales by more than 12% to RMB9billion (US\$1.3bn). Exports rose by more than one-third, while sales volume swelled by nearly 9% to exceed 29,000 machines. This is more than half of last year's total sales of 54,000 machines.

Its servo-hydraulic Haitian Mars (toggle) and Jupiter (two-platen technology) were key growth drivers in the period, due mainly to demand from consumer goods, household appliances and 'new energy vehicle' sectors. Electric machines also saw increased sales volume and revenue - with over 2,000 machines (up nearly 5%) and sales of RMB1billion (around

US\$150 million, up 5%).

"We are developing machines that are even more energy-efficient and intelligent, offering tailored solutions with high added value," said Zhang Bin, CEO of Haitian.

The company is also building new production sites in Japan, Serbia and India, he added.

➤ <https://haitianinter.com>

Moulder expands into US

French medical injection moulder JBT has expanded into the US by acquiring D&M Plastics.

JBT says this "solidifies its standing in the health-care and medical device sectors on the global stage". JBT says it will expand D&M's production space - which is currently around 5,000 sq m.

"This acquisition will strengthen our ability to offer local, agile and reliable industrial solutions to support the critical developments of our North American customers in ISO7 cleanrooms," said Philippe Cadot, CEO of JBT.

JBT has production in France, Hungary, Mexico and Tunisia. It has seven sites equipped with ISO7 and ISO8 cleanrooms and its expertise includes mould manufacture and injecting custom-made devices.

➤ www.groupejbt.com

Forvia Hella reports flat sales

Automotive supplier Forvia Hella reported flat half-year sales - while profits dipped by nearly 5%.

The company, which supplies lighting and electronics products to the auto industry, said H1 2025 sales were €4 billion, down about 0.4% compared to the same period in 2024. Profit fell to €237 million, down 4.5%.

"In the first half the year, we kept sales and earnings largely stable," said Bernard Schäferbarthold, CEO of Forvia Hella. "Our business development is in line with our expectations."



IMAGE: FORVIA HELLA

Schäferbarthold: "Sales and earnings were largely stable in the first half the year"

In its Lighting business, sales fell 7% to €1.9bn due mainly to the phase-out of various large-volume series projects. This particularly

affected business in China and the US. In addition, difficulties in Europe affected the business in the second quarter. Profit in the segment fell around 5% to €63m.

The company expects 'currency adjusted' full-year sales to reach €7.6-8.0bn for the year - a dip of 1-6% compared to 2024.

"The first half of this year has been solid, but we see a high level of uncertainty in the automotive environment and do not expect a far-reaching market recovery in the mid-term," said Schäferbarthold.

➤ www.hella.com

Standard for digital twins published

Euromap, the umbrella association for European plastics and rubber machinery makers, has published a standard for creating digital twins for moulds.

The 'Asset Administration Shell (AAS) Submodel Template' has been created in collaboration with the Industrial Digital Twin

Association (IDTA).

The AAS serves as a standard for creating a digital twin - a virtual representation of assets such as an injection moulding machine or mould.

It is crucial in improving interoperability and efficiency by providing a unified data basis for the analysis

and optimisation of production processes, says Euromap.

"This is a significant milestone for the industry," said Mikula Thiem of Euromap's technical commission. "The AAS is an important addition to OPC UA."

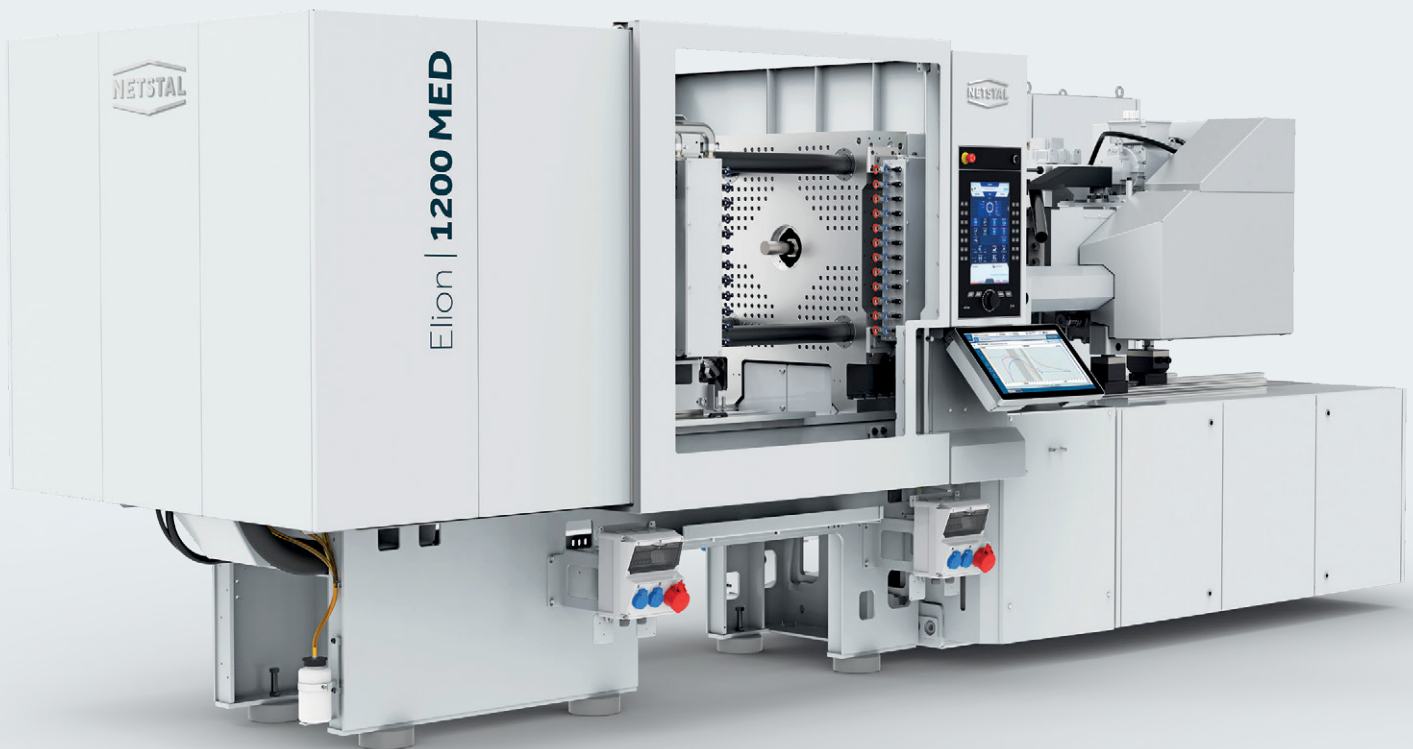
➤ www.euromap.org



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Plastics Europe gives cautious welcome to car recycling rules

Plastics Europe has welcomed proposed updated rules for vehicle recycling – but believes they should go further.

The End-of-Life Vehicles Regulation (ELVR) is due to replace the earlier End-of-Life Vehicles Directive this year. While the European Parliament has called for a 20% recycled target in new vehicles, Plastics Europe prefers

the European Commission's proposal of 25%.

"This is not only achievable but essential," according to Virginia Janssens, managing director of Plastics Europe.

"A 25% target would help create the market pull essential for a thriving circular economy, but reaching it requires urgent action."

The association also wants the target to come into force after 72 months – rather than 120 months, as has been proposed – and for up to 5% to come from circular sources like bio-based feedstock.

"However, we are concerned by the exclusion of bio-based plastics from the ELVR targets," she added.

➤ <https://plasticseurope.org>

Sanner starts production at US injection moulding plant

Sanner, which makes healthcare packaging and drug delivery solutions, has started production at its first US-based production facility.

The 60,500 sq ft plant in Greensboro, North Carolina includes injection moulding machinery and ISO class 7 & 8 cleanrooms and laboratory capabilities for testing and metrology. It will produce injection-moulded components for medical devices and pharmaceutical packaging, as well as providing pharma desiccant packaging.

"This reinforces our commitment to our customers in North America with



Sanner has begun production at its first US production facility

local production, cutting-edge technology and world-class service," said Christian Classen, chief sales officer of Sanner.

The new plant – which

has 20,000 sq ft of expandable production space – follows other recent Sanner expansions in Germany and China.

➤ www.sanner-group.com

Rosti adds India plant capacity

Rosti has added extra capacity to its planned injection moulding facility in Chennai in India.

This adds 7,500 sq m of manufacturing space. The new plant was originally announced in September 2024, with a size of 3,000 sq m.

Once operational, the facility – due to open at the end of this year – will house 45 injection moulding machines ranging from 35 to 500 tonnes. It will initially employ 100 people, with plans to expand this to 200 within two years.

The Chennai facility will initially focus on high-precision plastic injection moulding and contract manufacturing. The original decision to build it came from a collaboration with a long-standing customer that wanted production in the region.

➤ <https://rosti.com>

Sunningdale buys Sanwa Plastic

Sunningdale Tech is to buy fellow Singaporean firm Sanwa Plastic Industry.

It says this will "solidify its position as one of the largest precision plastics engineering companies".

Sanwa operates across seven manufacturing sites in China, Indonesia, India and Singapore.

Both firms specialise in "precision plastic components" but Sunningdale says

customer and product overlap between them is minimal. The combined company will have sales of S\$850 million (US\$663m).

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North American machinery sales rise in first half of 2025

Plastics machinery sales in North America rose in the first half of the year.

Figures from the Plastics Industry Association's Committee on Equipment Statistics (CES) show total sales of around US\$505 million for the period – more than 3% ahead of the same period last year.

"Shipments stopped falling in the second quarter – and increased by 3.5% in the first half of the year," said Perc Pineda, chief economist at the association.

"It seems the plastics

industry had a better handle on trade and tariff challenges across the value chain in the second quarter compared to the first."

Sales value in Q2 was around US\$254m – up 0.7% from both the previous quarter and the same period in 2024.

Injection moulding sales were down 3.1% on the previous quarter, but up 5.4% from Q2 in 2024.

There was a 49% increase in twin-screw extruder sales compared the first quarter, and a doubling (up 115%) from the Q2 of 2024. In

contrast, single-screw extruder sales fell 11% on the previous quarter, but rose 6.5% year-on-year, said the association.

On US plastics machinery trade, imports fell nearly 8% compared to Q1 but rose nearly 2% compared to the same period last year. Total exports rose 0.4% from Q1 but fell by more than 4% year-on-year.

In the second-quarter survey of CES members, 58% of respondents expected market conditions to remain steady or improve over the next 12 months –

down from 62% in the previous quarter. However, the share reporting that quoting activity held steady or improved rose from 65% to 76%.

"The advance estimate of US real GDP showed a 3% increase in the second quarter," said Pineda. "The broad-based increase in household spending – across durable and non-durable goods and services – also points to room for growth in plastics manufacturing, particularly as imports decline."

➤ www.plasticsindustry.org

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Wrapped up: latest in packaging technology



IMAGE: BOREALIS

Packaging developments at this year's K show include several new all-electric machines, as well as a scheme to produce and recycle foamed drinking cups

It's no surprise that this year's K show in Germany will showcase many packaging technologies - but restaurants and bars at the fairground will also be offering reusable cups made from **Borealis** foamed polypropylene.

The initiative will serve as a pilot for assessing the effectiveness of scalable reuse systems at large events. **Messe Düsseldorf** will analyse usage patterns - tracking how many cups are used, re-used, and recycled. The insights will contribute to the development of more sustainable solutions for future events.

During K, Messe Düsseldorf will install special collection containers. Visitors can return the cups to service points, place them in special collection containers or take them home for personal use.

"Introducing reusable cups to replace single-use cups at K2025 supports our sustainability goals," according to Thomas Franken, K director at Messe Düsseldorf.

The foamed PP for the cups is produced using

chemically recycled feedstock using OMV's ReOil technology.

Maximilian Grasserbauer, senior vice president for the circular economy at OMV, said: "ReOil is our chemical recycling technology that converts end-of-life plastics into circular feedstock."

Other partners in the development of the cup are: injection moulding machine maker **Arburg**; **Bockatech**, whose EcoCore foaming technology was used to make the injection moulded cups - cutting plastics use by up to 50%; **MCC Global IML**, which makes in-mould labels for rigid plastic packaging; and Miko Pac (part of **Paccor**), which develops and produces plastic packaging.

Lighter preform

German packaging specialist **KHS** says it has created one of the lightest PET bottles - thanks in part to preform technology from **Husky** of Canada.

Under the working title of Factor 101, it has produced a container that uses 5.89g of material to

Main image:
Visitors to
K2025 will be
able to use
foamed cups
made from
Borealis
foamed PP

Right: KHS and Husky have teamed up to create "one of the world's lightest PET bottles"

hold 591ml of product – equivalent to a 20-ounce bottle in the US. It originally launched its 'Factor 100' concept as a feasibility study in 2017, with a PET bottle weighing around 5g holding 500ml. Following several optimisations, it has now arrived at Factor 101.

To achieve a high 'top load' threshold, the container shape had to be adapted – as did the preform.

"The preform design needed to be developed further," said Fabian Osterhold, a packaging designer at KHS. "This is why we joined forces with the Husky."

The stretching factors from blank to bottle – and the resulting preform dimensions – were vital. The relation of length to wall thickness is especially relevant to injection moulding. In this case, KHS addressed the specifications and feasibilities of the stretch blow moulder and bottle design, while Husky made modifications to the preform.

"The focus was on the exact profiling of the preform made possible by KHS technology," said Osterhold.

Compared to the standard lightweight PET container that holds 500ml of still water – which usually weighs 7g on the US market – the KHS/Husky product requires 30% less material. It can also be made entirely from rPET.

Factor 101 was first presented by Husky at NPE 2024 last year.

"The prime target markets are the US, the Middle East and South America – and the first projects are already in preparation," he said.

Sustainable boost

Stork IMM has developed a new all-electric line of injection moulding machines for the packaging market – which it claims delivers greater sustainability.

The machines – which will be seen at K2025 – boast lower energy consumption, a new rack-and-pinion drive system and customised process tailoring for applications in thin-wall food packaging and industrial paint pails and buckets.

Below: Stork IMM's new line all-electric injection moulding machines are for the packaging market



IMAGE: JÖRG SCHWALFENBERG

"This machine extension satisfies growing customer demand for high-performance injection moulding machines that meet sustainability goals for the packaging market," said Gert Boers, CEO of Stork IMM.

The new series pairs clamping units of 250-700 tonnes with a range of injection units – with screw sizes from 45 to 84mm. It claims to achieve 15% greater energy savings compared to similar hybrid machines and work at speeds suitable for thin-wall packaging applications. The new rack-and-pinion drive is very rigid, energy efficient and provides reduced wear and longer life. It provides higher speed forces for the clamp and injection units compared to ball bearing and spindle drives, says the company. There is also a system that feeds recovered energy back into the customer's energy grid.

Key applications include closures, tubs, containers, cups, paint pails and buckets.

All-electric options

Sumitomo (SHI) Demag will showcase eight all-electric machines at K2025, featuring options from the IntElect and Pac-E platforms.

This includes the launch of an all-electric 2K multi-component IntElect 350-tonne machine combined with a Sam-C20 robot. The R-position offers a standard option for 220-500-tonne IntElect machines, with an adjustable nozzle distance providing added flexibility.

At K2025, the Sam-C5 will be presented as a standalone robot, to emphasise its key features.

"It is designed to match the six second cycle times of a standard IntElect machine with a focus on compact construction," said Jürgen Schulze, automation business development director at the company.

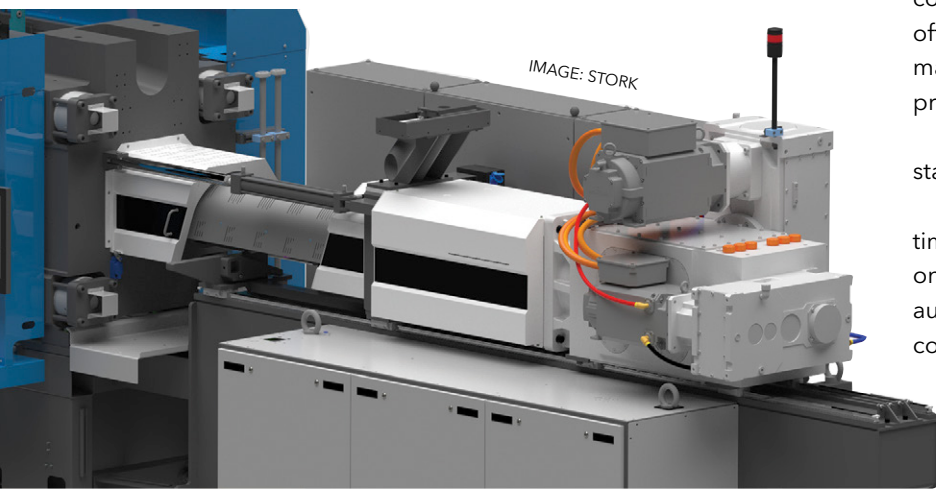


IMAGE: STORK

Mounted on a 75-tonne IntElect machine, the system measures less than three metres in total height.

Other all-electric automation exhibits are presented by automation partner Sepro - which will use an IntElect S 130t to make a 15ml centrifuge tube cap - and Technotrans, which will showcase the production of reusable and reclosable lids on an IntElect S 75t with a SAM-C robot

Sumitomo Demag will also unveil two new Pac-E machines, which were created in collaboration with electric drive specialists in Japan.

The first 420-tonne Pac-E machine will be used in a packaging caps and closures demonstration with clean, digital inline cap printing. Developed by Swiss supplier Caprint, this fast changeover personalisation proves that processors moulding 72 caps every 2 seconds can seamlessly print and quality check customised designs for branding differentiation and match the closure moulding speed. The production cell also comprises a 72-cavity tool from Z-Moulds, a mould area dehumidification system from Eisbär and an inspection camera and box packing system from IMDVista.

Using clean toggle technology co-developed in Germany, a second 420-tonne Pac-E machine will show how medical processors can accomplish flawless multi-cavity production ranging from medical cups to blood collection tubes.

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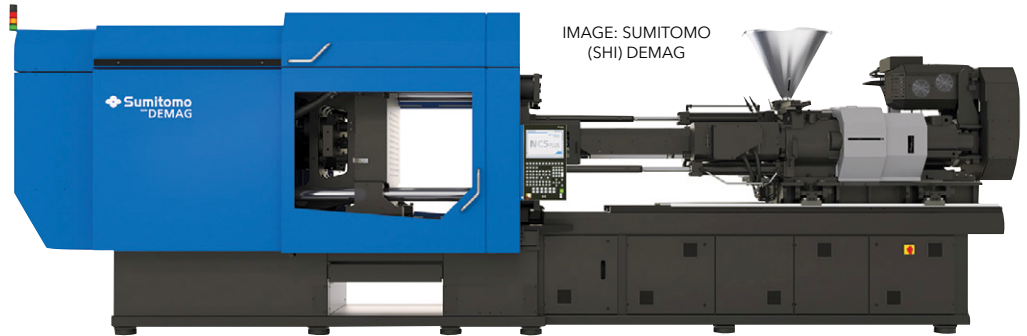


IMAGE: SUMITOMO (SHI) DEMAG

"This is a perfect example showing where a high-speed machine built for one

sector is just as useful for another mass production environment," said Andreas

Montag, medical business development director at the company. ➤

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Right: Netstal made preforms at Drinktec on a new PET-Line 4000 injection moulding machine

The automation for the exhibit is provided by Zubler and the tool comes from Otto Hofstetter.

Efficient preforms

Netstal presented a new-generation PET-Line 4000 injection moulding machine at Drinktec earlier this year.

During the show, it produced 6.9g PET preforms with a 25/22 thread, using resin with 30% recyclate. To boost sustainability, the preforms produced were then fed back into the PET recycling loop.

Part of the solution was a new mould from Krones Group sister company MHT - with 144 cavities and an integrated self-cleaning function. The PET-Line 4000 operates the mould with a fast cycle time of 4.8 seconds, producing around 108,000 preforms per hour with a clamping force of 400 tons. For higher output at the same clamping force, MHT offers a mould with 160 cavities. For maximum output, customers opt for the PET-Line 5000, which can be equipped with up to 192 cavities.

A key element in increasing efficiency in preform production is continuous optimisation of energy efficiency, which is achieved with the integrated recuperation of kinetic braking energy from the clamping unit and post-mould cooling station. The optional System Pressure Reduction helps raise efficiency further. When this function is activated, the pressure in the hydraulic system is maintained at the optimum point, which is often below the maximum pressure.

In cooperation with IMDvista, Netstal has integrated a quality monitoring system into the



PET-Line. The camera-based inspection system allows real-time detection of defects. It can also be used flexibly for new preform designs. With integrated quality control, users can identify potential weak points in the injection moulding process at an early stage.

CLICK ON THE LINKS FOR MORE INFORMATION:

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08.-15. October 2025 Stand 13 A 43



Soft touch: advances in thermoplastic elastomers

Thermoplastic elastomers (TPEs) are found everywhere – from toothbrush handles to training shoes – and are widely used for their flexibility, durability and processability.

Kraiburg TPE will focus on two new product series at K 2025.

With its FC/CM3/AD1 series, it will concentrate on the consumer sector, especially food packaging. The compounds comply with European Regulation (EU) No. 10/2011 and Title 21, Part 170 to 178 of the Code of Federal Regulations (21 CFR) of the US FDA.

They were developed for applications in contact with fatty foods or cosmetics and have low migration values between the packaging and the food transported in it. As well as being processable in multi-component moulding, the compounds offer properties such as a pleasant feel and high robustness, combining durability with high quality.

The second product seen at K2025 is the FR3 series. These are TPEs whose flame retardancy has been improved. Based on successful tests, all

requirements of the European standard for railroad applications DIN EN 45545-2 R22 HL3 and R23 HL3 have been met.

As well as being suitable for fire protection, they have other properties that make them ideal for applications in this environment – including good PP adhesion and processing in standard injection moulding processes.

At Chinaplas recently, the company introduced its Thermolast R RC/AD/PA/AP series for the Asia-Pacific market. A high recycled content and optimised mechanical properties enable manufacturers to develop products while meeting strict quality standards.

“This is a TPE with both post-industrial (PIR) and post-consumer recycled (PCR) materials,” said Low Shwu Ping, assistant PD manager for industry at Kraiburg TPE.

The series features a hardness range of 40-90 Shore A, as well as an optimal balance of flexibility and durability. It bonds well with polyamide (PA)

Main image:
Kraiburg's new Thermolast R RC/AD/PA/AP TPE bonds well with polyamides



materials, especially PA6 and PA66 and is well-suited for over-moulded housings. It has over 50% post-consumer (PCR) and post-industrial recycled (PIR) materials.

The series delivers a non-sticky surface for good grip and comfort in hand- and power-tool applications, while improving usability. The series is available in black, with optional pre-colouring to suit specific needs.

Foaming advance

Covestro has launched Desmopan Fly, a thermoplastic polyurethane (TPU) for use with supercritical fluid (SCF) foaming technology. It meets demand for lightweight footwear design, as well as applications such as sports gear, furniture and electronic products.

Desmopan Fly's formulation enables superior SCF dispersion during moulding, for uniform fine-cell structured foams with good mechanical properties. In footwear, this creates midsoles with better cushioning and energy-return properties, it says. The lack of chemical blowing agents and crosslinking additives ensures recyclability of the midsole.

"Sports brands are driving demand for materials that combine elite performance with strong environmental credentials," said Wilson Chan, head of business development for TPU Asia Pacific at Covestro. "Desmopan Fly brings lightweight and resilience while maintaining dimensional stability and durability."

Covestro has installed the SCF injection foaming system at its TPU Asia-Pacific R&D centre in Taiwan.

Christian Haessler, head of global innovation for TPU at Covestro, added: "This in-house capability enables us to optimise TPU material properties with precise SCF processing parameters. We can combine TPU and SCF injection expertise to accelerate customer developments."

Covestro has also begun production of its new Desmopan Rx medical-grade TPU at its Changhua

site in Taiwan – its second facility worldwide after New Martinsville in North America.

The new grades are engineered to meet stringent international requirements for medical applications and minimise contamination risks. They are verified for biocompatibility in accordance with ISO 10993 and China's YY/T 1557 standards for TPU used in infusion, transfusion and injection equipment. They are free from added plasticisers, exhibit low extractables and are compatible with multiple sterilisation.

They were developed for medical device components such as thin-walled flexible tubing, catheters, connectors, component housings and endoscopes.

Range extended

Hexpol TPE has extended the hardness range of its Mediprene A2 TPEs for multi-component medical applications.

The new materials – with hardnesses from 25 to 65 Shore A – bond to thermoplastics such as ABS, PC, PETG and SMMA in overmoulding and coextrusion processing. This allows integration of features such as seals and grips in medical devices without the need to use adhesives or surface treatments.

"Achieving chemical bonding to engineering thermoplastic substrates with TPE materials of lower hardness is particularly difficult," according to Niklas Ottosson, medical technical manager at Hexpol TPE.

Mediprene TPEs are produced with traceability and documentation based on ISO 13485:2016 (medical devices) and following the VDI 217 guideline on medical-grade plastics. They are made at the company's Sweden site, which was recently upgraded with a new production hall, compounding line and monitoring systems dedicated to medical production.

"This minimises contamination risks and strengthens our commitment to the strict cleanliness, traceability and reproducibility controls our medical customers expect," said Ottosson.

TPE certification

Teknor Apex has achieved RecyClass recycled content certification for its recyclate-containing thermoplastic elastomers (TPEs).

Audits were performed by Dutch certification agency Kiwa for the Sarlink Rx 4100B series of TPVs and Monprene R6 CP-10100 series of TPE.

RecyClass is a European initiative that provides guidelines, certification and testing to help companies design packaging that is compatible with existing recycling systems.

"A core component of our RecyClass certification ensures the traceability of recycled plastics, which

helps us meet our sustainability goals and create transparency for our customers,” said Patty Mishic O’Brien, chief sustainability officer at Teknor Apex.

Teknor Apex says it chose RecyClass certification to show its commitment to the circular economy. It says RecyClass focuses on the recyclability of plastic packaging and the traceability of recycled plastic content, with assessments tailored to the complexities of plastic recycling. It is also strongly aligned with EU regulations and initiatives, such as the 2018 European Strategy for Plastics in a Circular Economy, it added.

PU tie-up

Hennecke has signed a deal with Chinese engineering group **Yizumi** to combine its polyurethane technology with injection moulding.

The aim of the cooperation is to develop integrated overmoulding technologies that combine high-quality surfaces with functional added value, says Hennecke.

The project builds on findings from Yizumi’s research on ReactPro technology, which enables the production of functional surfaces with a high degree of design freedom and resistance through

direct integration of PUR overmoulding in the tool.

“The combination of injection moulding and PUR opens up new possibilities for functional and aesthetically sophisticated components,” said Thomas Wildt, CEO of Hennecke.

The company says it has worked on PUR overmoulding for large-scale production for more than three decades. Increasingly, the focus is on industrial integration in a combined process step – for example, the production of scratch-resistant, high-gloss surfaces for the automotive industry or the combination of decorative and functional elements in consumer electronics or household appliances.

It says the cooperation with Yizumi is part of its strategic orientation to develop new applications for PUR technologies with various system partners.

CLICK ON THE LINKS FOR MORE INFORMATION:

- > www.kraiburg-tpe.com
- > www.covestro.com
- > www.teknorapex.com
- > www.hexpol.com
- > www.hennecke-group.com
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Recyclates go back in the mix

Recent advances in recycled plastics include two projects to upcycle packaging waste into injection moulding grades and a rheology test that optimises stabiliser loadings

Recycled plastic has become a key commodity – with industries such as automotive, under pressure to use greater amounts in their products. While suppliers continue to develop new grades based, there are also efforts to encourage more use of recyclate.

One, from researchers at **Fraunhofer Institute for Structural Durability and System Reliability** (LBF), has led to better rheological tests for polypropylene (PP) – allowing more precise amounts of stabiliser to be used in recycled grades.

Typically, the optimum amount of antioxidant needed is determined after extensive, costly testing. This is not profitable when producing recyclate from old material batches with variable quality and varying stabiliser content, says Fraunhofer LBF. The approach of adding ‘enough’ stabiliser is unsuitable – and expensive – and there is also an upper limit for the compatibility of stabilisers and the polymer. During each life cycle, the stabilisers are used up as intended, with their by-products remaining in the plastic. This makes it more important to add only the necessary amount during recyclate production.

Online rheological tests speed the process of achieving exact stabilisation and optimising costs, say the researchers. They are characterising the melt online during compounding, which determines useful information on the processing

behaviour of plastics – such as the flow curves of both shear and elongational viscosity.

In initial tests, a partially stabilised virgin PP served as a model. A clear link was found between the viscosity values and the stabiliser concentration, or the viscosity values and the molecular weight. For recyclates, one post-industrial and one post-consumer PP were analysed. The post-industrial PP from start-up material and injection moulding sprues still had a high stabiliser content. This means no significant improvements in preserving the molecular weight were achieved here with stabiliser additions of more than 0.1%. In the post-consumer PP, the antioxidants are consumed to a high degree, which shows significant damage during processing. For optimal stabilisation and minimal damage to the recyclate, a 0.5% additive loading is required.

Japanese goal

A consortium of industry, government and academia has set a target of using over 15% recycled plastic in the production of cars in Japan by 2031 – and over 20% from 2036 – according to a report in *The Japan News*.

The goal is partly in response to new regulations to be introduced by the European Union in 2031 – that would require at least 20% of the plastic used



IMAGE: PALUREC

Main image:
FKuR now offers Paluren
– an LDPE made from recycled of beverage cartons by Palurec



in the production of cars to be recycled plastic.

The consortium includes the Japan Automobile Manufacturers Association, Japan ELV Recycler's Association and the Japan Plastics Industry Federation.

Although the Japanese car industry uses around 1 million tonnes/year of plastics, very little of this is recycle, according to the report.

Aesthetic appearance

FKuR will present an expanded portfolio at K2025, including Paluren – an LDPE from **Palurec** made from recycled beverage cartons.

The material, available in pellet form, contains around 4% aluminium flakes. This gives products made from it a unique appearance. Palurec uses a mechanical-physical process that uses no organic solvents, with water as the only separation medium.

Paluren can be processed similarly to conventional PE and allows the use of hot runner injection moulding technology as well as common polyolefin-based colour and additive masterbatches. It can also be welded and bonded. The aluminium flake content is used to create attractive aesthetic properties.

Below: Better rheological tests allow more precise amounts of stabiliser to be used in recyclates, says Fraunhofer LBF



"At K2025, we will emphasise our ongoing commitment to circularity in the plastics industry," said Patrick Zimmermann, managing director of FKUR.

Circular headlamps

Covestro has introduced a new line of post-consumer recycled (PCR) polycarbonates made from end-of-life automotive headlamps.

Developed in a joint programme initiated by the German federal enterprise GIZ, with Volkswagen and NIO as key partners, the grades contain 50% recycled content and are commercially available for new automotive applications. Volkswagen and NIO are already validating the material for potential use in future vehicle designs.

"This new line of polycarbonate represents a significant step in supporting the automotive industry's transformation towards a circular future," said Lily Wang, global head of engineering plastics at Covestro.

"PCR materials derived from end-of-life headlamps enable customers to meet increasingly stringent regulatory requirements."

Covestro has also been collaborating with partners such as Chinese recycler Ausell to establish closed-loop pathways for high-value plastics from end-of-life vehicles (ELVs).

The new PCR grades will help automotive companies comply with new rules including the EU's End-of-Life Vehicle Directive – which sets recycling targets – and China's Extended Producer Responsibility (EPR) programme, says Covestro.

Recycled quality

Mouldmaker **Simoldes Plastics** and materials supplier **Polykemi** have discovered that recycle-based resins can perform as well as virgin materials in moulding tests.

The joint project began as a request from Simoldes' automotive industry customers, who

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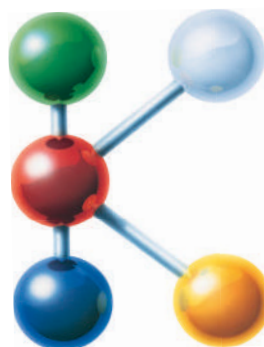
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wanted to raise the proportion of recycled plastic in their products. The two companies then tested and evaluated how recyclate-based plastics behave in tools previously only used for virgin materials.

All tests showed that recycled plastics performed well in the moulds – without the need for any changes – when making interior door frames and panels.

“Evaluations have shown that our processes work well with engineering thermoplastics based on mechanical recycled content – in the way we would expect with virgin materials,” said Mariusz Nowak, project manager research and innovation at Simoldes Plastics.

When virgin materials are replaced with recycled materials, Simoldes can show precise emission savings using Polykemi’s analysis. The key to the reduction lies in making conscious material choices.

Jörgen Olsson, technical manager at Polykemi, added: “Our initial calculations show that Simoldes will lower its CO₂ emissions by 54-68% per manufactured part.”

The tests also evaluated how recycled materials cope with processes such as insert moulding.



IMAGE: POLYKEMI

Results from tests involving ABS injection moulding using recycled materials and either textile or foil in the moulds were equivalent to those from injection moulding using new materials.

“The ability of recycled materials to cope with such a process is a testament to its high quality,” said Olsson.

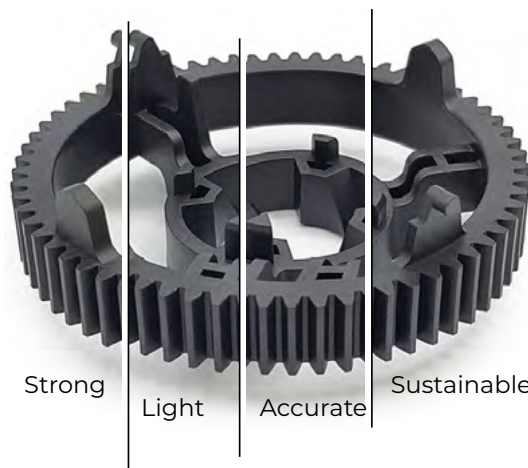
“Old perceptions that recycled raw materials provide poor results and are more difficult to process can now be discarded.”

Above:
Simoldes
insert-moulded
this interior
door panel
using recycled
material from
Polykemi



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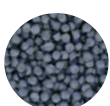
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Above: Elix Polymers is helping Simoldes use more recycled materials in vehicle interiors

Right: CRP's new PA12 injection moulding grade is recycled from an SLS material

Interior benefit

Simoldes has also worked with **Elix Polymers** to incorporate more recycled materials into premium vehicle interiors.

In its Boost project, Simoldes aims to increase the use of renewable materials by 40% during the development phase of its products. This is where E-Loop products from Elix come in, as they have mechanically recycled content. A technical validation process – on a PC/ABS with 30% PCR content – included mechanical, thermal, processability, odour and emission performance against the needs for automotive interior non-visible safety products. The product has shown equivalent properties compared to the traditional prime materials, but the carbon footprint can be reduced by up to a 40%.

Demanding upper interior pillars with airbag have been injected in a “unique” process, with moulds from Simoldes, to produce textile-covered parts. Visible decorative parts for door panels with class A surfaces have also been part of the evaluation programme. The parts have been presented to automotive OEMs.

Technical boost

TechnoCompound and RW Plano are working on concepts using post-consumer recyclate (PCR) in technical products in automotive applications.

The project to use PCR packaging is performed against the backdrop of the numerous EU regulations that are currently being discussed and have already been passed, such as the End-of-Life Vehicles Directive.

“The co-operation with RE Plano is an important step in the upcycling of PCR from the lightweight packaging fraction for technical applications, such as vehicle interiors,” said Dirk Breitbach, managing director of TechnoCompound. “This application has very high requirements in terms of emissions and odours, as well as the mechanical properties of our products.”

At its sorting plant in Bochum, Germany, RE Plano uses an AI-supported system that recognises individual packaging, enabling the company to achieve the highest purity levels in the recycled material it produces. Through compounding, additivation and further material processing, TechnoCompound uses these raw materials to produce plastic grades that pass emission chamber tests specified by vehicle OEMs.

Recycled PA12

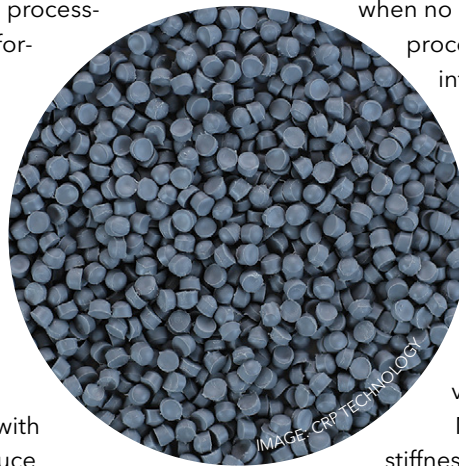
CRP Technology has launched an injection-moulding grade of PA12 that has been recycled from a 3D-printing grade.

Windform XT 2.0 IMG includes carbon fibres and is derived from the company's Windform XT 2.0 selective laser sintering (SLS) grade. It does not incorporate any virgin materials, says the company.

Windform XT 2.0 is supplied as a powder which, when no longer suitable for the SLS process, is collected and reprocessed into Windform XT 2.0 IMG pellets.

“We have regranulated the Windform XT 2.0 powder cake, and made it suitable for injection moulding,” said Franco Cevolini, CEO and technical director at CRP. “We are now ready to sell it to those who manufacture in large volumes.”

Material properties include high stiffness and shock resistance. This makes it suitable for industries such as automotive, transport and industrial design.



CLICK ON THE LINKS FOR MORE INFORMATION:

- > www.lbf.fraunhofer.de
- > www.fkur.com
- > www.palurec.com
- > www.covestro.com
- > www.simoldes.com
- > www.polykemi.se
- > www.elix-polymers.com
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- > www.crp-group.com



Moulders' guide to 2025

Part 1: Machinery and ancillaries

The world's largest, most international plastics trade fair opens next month, in Dusseldorf in Germany. K2025 will host the latest innovations in plastics materials, machinery and services. However, it's a huge event that's best approached with a plan: our pre-event coverage will help you get the most from your time there.

In this issue, we look at some of the planned introductions in machinery and ancillaries that are likely to interest injection moulding companies. Over the next nine pages you can find details on some of the latest developments in moulding machines, dies and control systems – as well as a variety of ancillary products. In our next issue, we will present details of new materials – including resins, compounds, plasticisers and pigments.

Messe Dusseldorf, which organises the show, says the plastics industry has faced a “global crisis” since K2022. In response, it says K2025 will showcase a “plethora of new and further technological developments” – as digitalisation and artificial intelligence (AI) emerge as key themes.

Machine-to-machine communication

has long been an issue in mechanical engineering. Connected machines have been available on the market for several years, providing a large volume of process data. At K2022, a key discussion topic between machine manufacturers, processors and end customers was who ultimately owns this data. The EU Data Act has provided clarity here, as it obliges machine manufacturers to make data generated during operation available to the machine user in a simple and comprehensible machine-readable form. OPC UA standards, which have become widespread in recent years, are ideal for this purpose, says Messe Dusseldorf. The advantages of such connected machines are also increasingly being recognised by customers. Developments in this area go hand in hand with increasing demands of this kind.

This development is being given a boost by AI – with several solutions and products expected at K2025. Examples include: automatic design and process optimisation; predictive maintenance; and optical quality control.

Further technical innovations will be seen in the field of ‘digital twins’, which

can store machine data and information in a structured, machine-readable way over the entire service life. They are particularly suitable for fulfilling the requirements of the Digital Product Passport (DPP), which was introduced with the EU Ecodesign for Sustainable Products Regulation (ESPR) coming into force in July 2024, says Messe Dusseldorf.

If you are planning to attend the show but are yet to finalise your travel and accommodation, it is not too late. But you should act fast. There are some useful weblinks at the foot of this page and plenty more in the ‘**First Look**’ article in the July/August issue of *Injection World*.

The *Injection World* and AMI magazines team will be at the show for the full eight days and will be gathering information for our post-event coverage in the Winter edition. We will also be reporting on the latest news and innovations as they happen via our @PlasticsWorld feed on X.

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Right: Bird 5 series IRD machines can be used to dry TPU before moulding

Bird Machinery will unveil its latest advances in the heating and drying of plastics at K2025.

The company makes compact infrared rotary drum (IRD) devices to treat bulk materials, including pellets, regrind, flakes, and powders. This makes the technology accessible for smaller throughputs.

The technology claims to offer advantages over conventional hot-air drying methods for bulk materials, including: 90% time savings; up to 70% in energy savings; and fast changeover times, for high flexibility.

"We have adapted IRD technology from large-scale plants for smaller throughputs, allowing injection moulding to benefit from the advantages of infrared heating," said Urban Stricker, the company's founder.

For common materials such as PA, PC, PMMA and ABS, the company provides standardised Bird 5 series machines. Throughput capacity is 4-100 kg/h for deep drying to specifications below 200-1,000 ppm. The drying time for this continuous process is 3-30 minutes, depending on the material and task. This saves over 90% of time and uses up to 70% less energy compared to previous drying methods, says the company. Switching to different materials is done in minutes by changing the rotary drum.

The device can also be used to dry TPU - which it says is TPU difficult to process due to its high sensitivity to moisture and narrow processing window. IRD can simplify this. In ongoing trials, Bird Machinery is testing a polyether-based TPU with Shore 85A, which is commonly used in injection moulding.

➤ www.birdmachinery.de

BMSvision will unveil its latest Manufacturing Execution System (MES) technology for the plastics and packaging industries at K2025.

These monitor and synchronise all manufacturing and logistic activities, from order input and inventory management to the delivery of the finished product. The company says its robust 24/7 data capture is rare in the industry.

The latest version combines AI-driven intelligence, advanced quality control and sustainability tools, says the company.

"Our systems are engineered for reliability even in the most demanding industrial environments," said Jan Bogaert, CEO of BMSvision. "This continuous data capture ensures real-time production visibility, enabling rapid identification of bottle-necks and minimising downtime."

Combining this with energy data allows MES to optimise cost and energy consumption.

"This year, we are adding capability that will allow



IMAGE: BIRD MACHINERY

our customers to analyse more data, automate more and reduce energy consumption," he added.

➤ www.bmsvision.com

At K2025, **Dr Boy** will show nine exhibits on its own stand - and seven more at partner booths.

One demonstration will show a Boy 125 E (with a clamping force of 1,250 kN) with integrated LR5 handling and 2C unit making ice cube moulds using multi-component technology - including intelligent automation.

In addition, it will launch the new Boy 100 Electric - the next step in the series. With the same mould installation space, it offers 1,000 kN clamping force and an SP 215 injection unit.

Another new machine is the Boy 20 E Pro, the successor to the Boy 22 A Pro. It has equivalent performance but lower energy consumption thanks to modern servo drive technology. At the show it will produce coloured deli trays with liquid colours.

➤ www.dr-boy.de

Engel will showcase a range of technology demonstrations at K2025 - as well as launching a new tiebarless injection moulding machine.

Its live demos include: the production of rear-end automotive light modules that do not require separate hardcoating; overmoulding precision seals for fuel cells with liquid silicone; and using the Fluidmelt process to make a novel bicycle handlebar.

The rear-end-light module, measuring around 600 x 240mm, will be made on a Duo 700 and a rotary table mould from Zechmayer. The colour design of a foil is first transferred to one side of the moulded part by thermoplastic back injection (Foilmelt), then positioned and shaped. On the



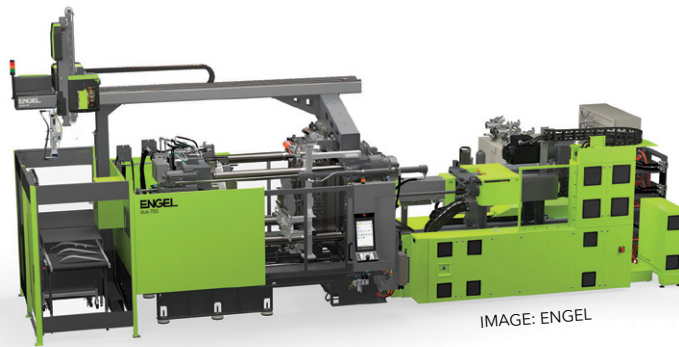
other side of the mould, Clearmelt is used in the same mould to cover the surface with polyurethane (PUR) – creating an in-mould coating. This gives the part a transparent, scratch-resistant surface layer in a single production step. Combining these process steps in a single cycle eliminates the need for costly hardcoating. The PUR layer protects against yellowing caused by UV exposure.

The production cell at K2025 is based on an Engel Duo two-platen machine with 7,000kN clamping force and a vertical rotary table. A new version of the Viper 40 linear robot is integrated for part removal.

The company will also run an automated production cell in which gas diffusion layers (GDLs) for fuel cells are encapsulated with a liquid silicone rubber (LSR) seal. This shows how sensitive functional elements made of film material can be overmoulded with LSR. The GDL foils are integral components in fuel cells and must be sealed with high precision without impairing their diffusion function.

The core element of the cell is a vertical Engel Insert 150 injection moulding machine with 1,500kN clamping force and an integrated rotary table. This enables simultaneous injection and demoulding, nearly doubling the output with a cycle time of 50 seconds.

Moulding is performed with a two-cavity mould concept from ACH Solution. Equipped with the ACH Servoshot 2G and its electric nozzle control, it ensures



high process reliability and part quality, even with multiple injection points.

An Easix articulated robot handles all part manipula-

tion. In the first step, it removes the GDL films from the feeding system and positions them in the front station of the rotary table

mould. After rotation, injection takes place in the rear station, where films are partially overmoulded with a thin LSR seal. Finished parts are then removed, and new films inserted. An integrated camera inspection system verifies the wall thickness distribution of the LSR seal.

Engel will also use a tiebarless Victory 180 machine with a clamping force of 1800kN to produce

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**Above:
Gollmer
Formen teams
up with Haitian
to provide
complete
injection
moulding
packages**

cockpit bicycle handlebars for Canyon Bicycles. Here, aluminium is replaced by plastic – which shrinks production time to 60 seconds.

The technique combines local reinforcement with continuous fibre-reinforced tapes and Fluidmelt technology to make hollow bodies within a closed process.

Components are made from a polyamide 6 with 50% glass fibre reinforcement supplied by Domo Chemicals. By integrating four unidirectional carbon fibre tapes (UD tapes) – placed in the mould before moulding – the part withstands high mechanical loads despite its low wall thickness and hollow structure.

During the process, Fluidmelt injects gas and pushes the plastic core of the component back into the plasticising unit, creating a hollow part. The displaced material is reused in the production of the next component. Combining local UD tapes and Fluidmelt enables complex hollow-body geometries while reducing material and energy use.

In addition, the company will introduce an updated version of its electric tiebarless Victory machine. At K, it will be used to make overmoulded fittings in a cycle time of 23 seconds. The mould includes large-volume core pulls, which are optimally supported by the free access provided

by the tiebarless design. With tiebarless technology, large moulds can be used on comparatively small machines, saving space, energy and investment. After moulding, the fittings are automatically equipped with seals. The production cell it has two Easix articulated robots to handle this step.

➤ www.engelglobal.com

Gollmer Formen, which procures injection moulds from places like China, Vietnam, India and Eastern Europe, will showcase its services at K2025.

“Our customers benefit from an excellent network, high quality standards and a German contractual partnership,” said Alexander Dangel, managing partner at Gollmer Formen.

As well as sourcing simple injection moulds, it can handle large, multi-cavity and both 2K and 3K moulds. At its site in Germany, the company has a fully equipped mould shop, where it can carry out changes and corrections.

These solutions combine the injection moulding machine and mould into a production-ready complete system. In cooperation with machinery manufacturer Haitian, it offers customers a complete package of injection moulding machine, injection mould and automation from a single source.

➤ www.gollmer-formen.de

Hasco will showcase new developments in mouldmaking and hot runners at K2025.

In mould bases, it has increased its cooling range. The extended cooling system Ø5 allows precise cooling of slide bars and small moulds – which is ideal for complex applications with limited build volume, it says. The range is supplemented by further chemical working substances with NSF H1 certification, to meet the highest safety standards in food and medical technology.

With a new slide retainer, Hasco offers a reliable way to avoid damage and malfunctions with slide inserts. The new InsertKey also enables unambigu-

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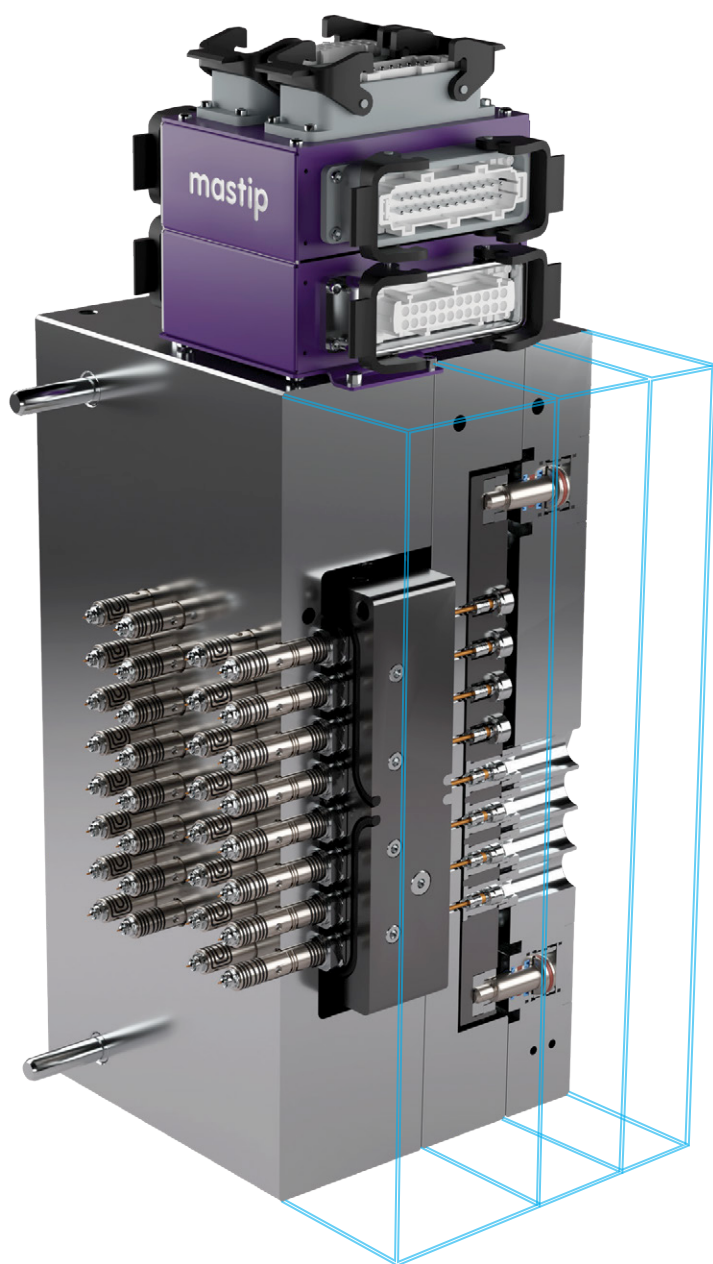
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Close Pitch Performance: Introducing the MX11 with Synchro Plate

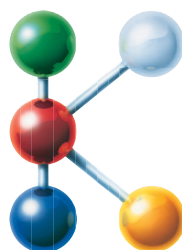


Introducing the MX11 nozzle with Synchro Plate, making its world debut at **K2025**.

Designed for high-cavity medical and packaging applications, the MX11 combines compact design with front-loading serviceability - allowing maintenance in the press to maximize uptime and efficiency.

Requiring a $\varnothing 16\text{mm}$ nozzle pocket and $\varnothing 8\text{mm}$ nut this nozzle is perfect for restrictive gating areas. The nozzle head is 22mm across flats.

With the Synchro Plate, you can achieve ultra-close cavity pitching while eliminating the need for individual actuators, streamlining your hot runner system like never before.



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ous coding of inserts – for a better overview and process reliability in mouldmaking.

It will also show how additive manufacturing can be used to make hot runners and filters. As well as making products with the highest possible throughput and the lowest shear, it will focus on methods for simple mould diagnosis to recognise wiring problems quickly and efficiently. Visitors will also be able to see the fast, intuitive ordering of spare parts – thanks to paperless mould documentation. This can always be called up directly at the mould.

➤ www.hasco.com

Japan Steel Works (JSW) will present three new all-electric machines at K2025. The machines, in the J series, have clamping forces of 800, 2,200 and 6,500kN.

A J80ADS (800kN clamping force) will produce a cover panel in recycled ABS on a demonstration mould provided by JSW. A downstream Scara and six-axis robot remove the part, which is then checked through a camera system linked with the process parameters. Meanwhile, a J220ADS machine will be used to make a two-component part by means of a Flip auxiliary unit. And, the J650ADS will demonstrate the advantages of designing large-size all-electric injection moulding machines.

Thanks to the design, electricity is only used when the clamping unit or injection unit is in motion. The drives of JSW machines are typically air-cooled. An OPC UA interface maintains the connection to the ancillary equipment.

The company says it has also launched the world's first 40,000 kN electric injection moulding machine – which was too large to bring to K. The machine is now part of JSW's standard lineup.

Target products for the 4,000-tonne machine include exterior parts such as car bumpers and tailgates, as well as making electric vehicle battery from plastic.

Currently, hydraulic systems are the mainstream for 4,000-tonne injection moulding machines, but they have issues such as elevated power consumption – while quality variations are likely to occur, says JSW. In addition, the maximum speed and acceleration of mould opening/closing and injection operations are low, making it difficult to shorten the production cycle.

Claimed benefits include: a maximum injection volume of 22,000cm³ – or around 18.6kg of PP; a 10% productivity increase on an equivalent hydraulic machine; and a 20% reduction in annual running costs.

➤ www.jsw.co.jp/en/

www.injectionworld.com



IMAGE: KISTLER

Kistler will present a range of cavity pressure sensors, systems and software for process optimisation and quality monitoring during K2025.

One example is its ComoNeo process monitoring system. As well as improved user-friendliness, version 7.0 focuses on the extra Multiflow function, which enables automatic control of individual hot runner nozzles in multi-cavity moulds. This gives injection moulders maximum control over product quality. The improved hot runner balancing helps both with the processing of recyclates and with cost savings.

ComoNeo has also had a hardware upgrade, giving it more computing power – which shortens processing times and makes the system fit for future functionalities, such as those based on AI.

While ComoNeo controls ongoing injection moulding processes, AkvisIO software gives insights into the production history and ensures seamless documentation, as required in industries such as medical. AkvisIO also evaluates large data sets in a few seconds and helps to identify cost drivers in the process.

"The software solution enables users to compare various quality-relevant key figures across many cycles and uncover correlations," said Pascal Bibow, who is responsible for developing AkvisIO at Kistler. "This allows them to quickly find the cause of process fluctuations or increased reject rates."

Separately, its KVC 821 inspection and sorting system detects typical injection moulding surface defects and assembly defects at cycle times of up to 800 parts per minute. To detect previously unknown or rarely occurring anomalies, Kistler also uses artificial intelligence in its KiVision software.

➤ www.kistler.com

KraussMaffei has redesigned its all-electric PX injection moulding machines and will launch models with clamping forces from 800 to 2,000 kN at K2025.

Key factors of the previous PX series have been

Above:
Kistler's
ComoNeo
system enables
automatic
control of
individual hot
runner nozzles



Right: At K2025, a KraussMaffei PX 80 will make electronic components from polyamide

retained, such as large tie-bar spacing, to allow the use of complex, heavy moulds. The wide support of the movable clamping plate guarantees perfect plate parallelism, and the linear guide ensures precise, energy-efficient movements, it says. Energy recovery (recuperation) also remains an integral part of the PX series, as does high flexibility for a wide range of industrial applications.

"We have made the PX more compact, more productive and more sustainable," said Jörg Stech, chairman of the management board of KraussMaffei Technologies.

This was achieved through a new structural design with optimised arrangement of individual components, new servo drive technology with electric ejector and a modular, space-saving enclosure.

All main axes and the new ejector are servo-electric, which improves cycle performance and reduces energy consumption by around 20%. For energy-efficient movement of mould core functions and cascades, it can be optionally equipped with a compact, servo-hydraulic auxiliary unit. The machine bed has also been shortened for a 20% reduction in footprint.

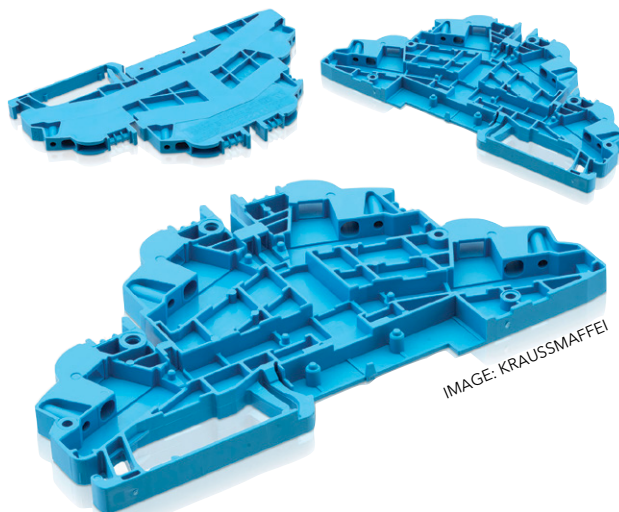
The PX marks the launch of the new MC7 control system – a, web-based platform with intuitive operation, powerful architecture and high safety standards. It already meets the future requirements of the Cyber Resilience Act (CRA), offering increased protection against cyberattacks and enabling seamless digital connection of the machine, says the company.

The PX series will be seen in a series of live demos at K2025. In one, a PX 80 production cell will produce electronic components made of polyamide. An LRXplus linear robot removes components and places them on a conveyor belt inside the machine enclosure. In another, a PX 200 in cleanroom design produces medical components on a compact footprint. Here, 96 inner needle protection caps for insulin pens are made in 4.5 seconds.

The company adds that its new chopped fibre processing (CFP) technology sets "a milestone" in the processing of fibre-reinforced thermoplastics.

The process enables direct, fibre-friendly compounding of polypropylene (PP) and chopped glass fibres in the injection moulding process. At K, a GX 650-4300 (clamping force 6500 kN) and LRXplus 350 linear robot will make a complex tailgate component – without reworking and ready for assembly straight from the machine.

"With CFP technology, we help customers to reduce their material costs in the production of fibre-reinforced components," said Jörg Stech,



CEO of KraussMaffei Technologies. "We are particularly proud of the patented screw geometry, which was developed specifically for the technology by KraussMaffei."

Compared to traditional processes using pre-compounded long glass fibre granulate, CFP enables separate dosing of PP and glass fibres. Both can be supplied directly via the machine's conveyor system, homogenised in the cylinder, and processed gently with the help of the new CFP screw. This ensures that no fibre clusters are formed during processing, ensuring optimum component properties at lower material costs.

It enables plastic processors to dose and mix polymers and fibres so they can develop their own formulations for components and build up material expertise. Savings in materials can cut costs by up to 30%, as well as reducing carbon footprint.

Thanks to the material savings and process advantages, return on investment (ROI) is less than one year, says the company.

➤ www.kraussmaffei.com

MachinePoint says that used industrial machinery – which it buys and sells – can help companies to reduce their carbon footprint.

"Various studies estimate that 70-75% of the CO₂ emitted over a machine's lifecycle is generated during its production phase – through raw material extraction, manufacturing, and transportation," said the company.

A used machine can help a company prevent the emission of 6-20 tonnes of CO₂ per unit, depending on the type of equipment, it says – equivalent to the annual emissions of two small cars. In sectors such as plastics, where production lines are very material- and energy-intensive, the positive impact is multiplied.

There are potential other advantages. It can also



reduce initial capital expenditure by 40-70% compared to new equipment, to reduce the return on investment (ROI) period. For example, a blown film line can be bought second-hand for €350,000 instead of €1 million new, while maintaining similar production capacity and product quality.

Delivery times are often much shorter: while a new machine may take 6-12 months to be delivered, a reused one can be up and running in less than three months, says MachinePoint.

➤ www.machinepoint.com

Motan will exhibit several new offerings from its Swift range of ancillary products, along with solutions to automate the extrusion process.

The Swift series covers the entire materials handling product range, from dosing and mixing to drying and conveying. Highlights include: S-Dry 40/80, a compact dehumidified air dryer range with multiple bin combinations that is focused on energy efficiency; S-Compact, which includes integrated conveying and optional control of an additive dosing unit; S-Convey HES, a single-phase material loader for granulates with intelligent control for demand-based material supply; and S-Color V, an additive dosing and mixing unit for masterbatch and regrind dosing applications.

"Our Swift products prove that affordable solutions do not have to compromise on quality, control, or sustainability," said Carl Litherland, CMO of Motan.

In addition, its Gravicolor 110 Med and Metro G Med are designed for pharmaceutical and medical plastics processing. They comply with FDA standards and guarantee maximum process reliability for sensitive materials.

➤ www.motan-group.com



Left: Machine-Point says used machinery helps companies cut carbon emissions and costs

Netstal will launch the latest generation of its Elion Med injection moulding machines at K2025 - which it says can increase production efficiency.

The series has been redesigned with a more compact design and shorter length by optimising the geometry of the toggle lever - for faster drying cycles - and adding a new injection gearbox with a compact metering drive. The reduced lengths have not affected clamping force - while the clamping unit area also offers better accessibility for maintenance work, it says.

The whole Elion portfolio is being updated over time, but for now four variants with clamping forces of 1200 and 1750kN are available. The target portfolio will cover 800 to 4200kN.

The newly designed toggle lever with 'double connecting rod' distributes the closing force over two bearing points and has been separated from the axis for the electric ejector. At the same time, Netstal says it has trimmed all drive components such as motors and gearboxes for maximum performance - allowing the Elion Med to maintain high speeds at high pressure in continuous operation. To raise energy efficiency, Netstal has designed a new type of direct drive for the unit movement and the application of the nozzle contact pressure.

At K, Netstal will produce a housing for autoinjectors in a cycle time of 12 seconds. The machine, equipped for use in cleanrooms, has a clamping force of 1200kN and uses a four-cavity mould from Zahoransky. The mould features individual, servo-electrically controlled valve gate nozzles and has a rotary unit with an integrated servo motor. Innovative index technology helps to cut the cycle time compared to conventional mould concepts, it says.

A six-axis robot mounted on the injection moulding machine will remove finished housing



Motan's S-Dry 40/80 is a dehumidified air dryer range with multiple bin combinations



Right: Netstal will use a new Elion 1200 Med to produce a housing for auto-injectors

parts with the mould closed. The compact automation solution from Saxe includes optical quality control and a production-ready solution for automatically changing the containers. The handling system is also fully integrated into the Axos control system of the moulding machine. Thermal parameters such as flow and return temperatures and the water flow rate in the mould are recorded and monitored in real time via the Mouldflo water distributors integrated into the mould 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).
www.netstal.com

Oerlikon HRSflow says its StarGate HRS hot runner technology enables precise control of melt injection into the mould cavity using a “revolutionary” Valve Gate. Another development – also seen at K – is Glow HRS, which allows direct injection of aesthetic parts in amorphous materials.

Other systems seen at the show include: an injection moulding tool for automotive parts that delivers a “flawless surface”; the Up Nozzle series, which is engineered for compact, tight-space applications with low shot weights; and new solutions for luxury and eco-friendly parts in the beauty and personal care industry.

StarGate HRS is for the injection moulding of PP, PE, PS and other amorphous thermoplastics. Benefits include: no need for production, assembly and maintenance of various components; reduced cycle times; easier colour changes; and lower power consumption and pressure loss. The thickness of the back plates can be reduced. The technology also enables short filling and packing times. At K2025, it will be used to make a bucket by BMB, an Italian

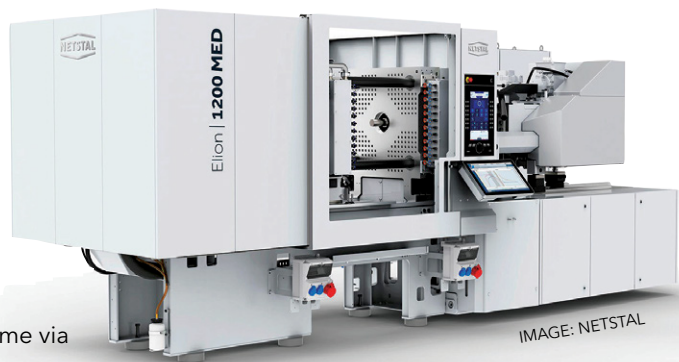


IMAGE: NETSTAL

injection moulding machine manufacturer.

Meanwhile, the patent-pending Glow HRS enables production of high-quality parts by direct injection, avoiding halos and weld lines. With precise surface temperature control and a compact design, it easily adapts to a range of applications.

At the booth of injection moulding manufacturer Haitian International, Oerlikon HRSflow will give a live demonstration of how the FlexFlow HRS servo-controlled needle valve technology can produce high-quality automotive parts directly in the mould. This will be illustrated by making a car wheel arch. Developed with DNP Group (a producer of automotive decoration film printing) and mould maker Inevo, the project shows that painting large injection-moulded parts can be eliminated – even when made from recycled materials. Other advantages of FlexFlow include quick colour changes and reduced material waste.

The new Up Nozzle series is engineered for tight spaces with low shot weights. With a 12mm nozzle cutout, it delivers high performance in hard-to-reach gate areas. These features make the series ideal for industries such as beauty and personal care, packaging, beverages, and technical applications. Oerlikon will show parts produced with dedicated hot runner solutions for luxury cosmetic packaging. Benefits include high clarity, wall thicknesses of up to 12mm, and high process repeatability.

www.hrsflow.com

At K2025, **Sabic** will showcase a new platform technology called Megamolding – which is used to mass-produce large thermoplastic parts.

The company says making these parts typically requires large, costly presses and can lead to processing issues such as warpage, inefficient cooling, and long cycle times. Megamolding claims to tackle these barriers by reducing tonnage requirements, and lowering machine, energy and labour costs.

Conventional mid-tonnage injection presses typically limit practical thermoplastic parts to under

Oerlikon's hot runners can make cosmetic packaging with wall thicknesses of 12mm



IMAGE: OERLIKON HRSFLOW



1m in length, says Sabic, while Megamolding can make parts in dimensions of 2m or larger. It has validated the approach for EV battery enclosures, which are "larger and structurally more demanding than conventional injection-moulded components".

EV battery enclosures, including the cover and tray, are usually made from aluminium castings or sheet molding compounds due to size, stiffness, and safety requirements. Megamolding can make them with injection moulding while reducing clamp force by more than half - making them commercially feasible, it says. Sabic is also looking to make large truck exterior panels, pickup beds and hybrid structural panels.

Megamolding combines Sabic's materials expertise with that of several unnamed partners, including machine manufacturers, toolmakers and Tier One automotive suppliers. One example is the use of cascade mould flow tooling, which sequences material filling across the mould cavity to cut clamping force by up to 50%.

Converters and OEMs access Megamolding by collaborating with Sabic - which provides elements including materials, application data, design guidelines and CAE support. Simulation helps to

mitigate warpage and shrinkage, while the platform also includes secondary processes such as in-mould coating and foaming.

"We are uniquely positioned to collaborate with industry partners across value chains to redefine what's possible in large-part manufacturing," said Sami Al-Osaimi, executive VP for polymers at Sabic.

> www.sabic.com

Shibaura Machine will showcase a range of robotic solutions for injection moulding applications.

A feature of its exhibit will be an automated production cell, where a TVM900 6-axis robot will integrate with an EC75SXIII injection moulding machine. This live demonstration will showcase real-time production of business card cases.

The SXIII series is an all-electric lineup of injection moulding machines designed for high-speed, energy-efficient operation. With 16 different models, it features the V70 controller for smooth integration, optimised cycle times and enhanced productivity. The injection moulding machine will collaborate with the TVM900 robot - which has a 900mm reach and 20kg payload capacity.

Shibaura will also show its TV1000 6-axis robot.



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Right: Shibaura Machine will showcase robotic solutions for injection moulding at K2025

With a 1,000mm reach and 10kg payload capacity, it is used in material handling, assembly, machine tending and packaging applications.

Complementing this, the RoboPrint printing head will transfer logos and designs onto the moulded plastic parts, demonstrating the potential of robotic integration for speed and efficiency.

"Robotic integration in injection moulding is transforming the industry," said Nigel Smith, managing director of TM Robotics, which distributes Shibaura products in Europe. "By automating repetitive tasks, manufacturers can meet rising demand while maintaining consistent quality for a faster return on investment."

➤ www.tmrobotics.com

Thermal management specialist **Technotrans** will use a production cell – based on a **Sumitomo Demag** moulding machine – to show the interaction of temperature control, cooling and water distribution when making a product from a bio-based plastic.

Here, a thermal cup will be made from a thermally sensitive, bio-based copolyester. This is a prime example of a solution tailored to the process: cooling of the mould and feed zone is handled by a Teco CW 25 cold water temperature control unit using propane (R290) as the refrigerant. Precise mould temperature control is provided by two Teco CI Eco units equipped with the Pump Efficiency Module (PEM) – a speed control system that adjusts energy consumption to demand.

"Our core competence lies in understanding the specific challenges of our customers and developing tailored, cost-effective solutions," said Nicolai Küls, managing director of Technotrans Solutions.

The company will also present the prototype of the Teco CI 160 Eco 70 with 18 kW heating capacity. With this unit, Technotrans expands its energy-efficient Eco.Line series with a new high-performance variant.

➤ <https://www.technotrans.de>

➤ www.sumitomo-shi-demag.eu



is now pivotable. The one-piece body eases installation and set-up at the customer's site, while the pivotable injection aggregate makes screw changes easier. The new model is fitted with the Unilog B8X control system, which includes several control system components developed in-house. These allow a higher internal clock frequency – and shorter response times to sensor signals. The machine will be available in sizes of 400-600 tonnes.

At the show, it will make a box (called a Haibox) from a grade of Borealis PP, using a single-cavity mould from Haidlmair of Austria. The machine will include a Wittmann IML unit, inserting labels on both long sides of the box. After parts removal, a thermal imaging camera is used to compare the product with a reference picture. If the temperature is outside the tolerance margin, a signal is sent to the robot to have the respective part sorted out.

At the same time, a MacroPower 650/2250H/1330H Combimould with a rotary table 1500mm in diameter will be used to make a foldable laundry basket from PP and TPR, using a 1+1 cavity mould from ATA Kalip ve Plastik of Turkey. The machine is equipped with a Primus 148T robot, which removes the parts and deposits them on a conveyor belt.

Wittmann will also show its new EcoPrimus all-electric machine that promises to save energy. It is now available in size 100 – that is, with 1,000 kN clamping force. At the show, an EcoPrimus 100/525 will be used to make closing caps for medical applications on a 24-cavity mould with an unscrewing device supplied by HTW of Austria. The parts are removed and deposited on a conveyor belt by a W918 robot.

Micro injection moulding will also be demonstrated, with a MicroPower 15/10 – equipped with a W9VS2 robot specially designed for it – making a lab-on-a-chip from transparent PP. Production takes place inside 3D-printed 2-cavity mould. A special feature of the moulded part (18 x 8 x 3mm) is its structures measuring 0.04 x 0.04 x 0.1 mm with corner radii down to 0.005mm.

➤ www.wittmann-group.com

Below: Wittmann Battenfeld will use its new MacroPower 500/3400 to make a 'Haibox' at K

Wittmann Battenfeld will present a range of new injection moulding technologies at K2025.

The highlight is the new MacroPower 500/3400 with a one-piece machine body – which claims to be even more compact than previous models. The injection has a new design and



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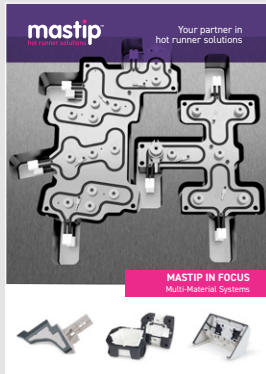


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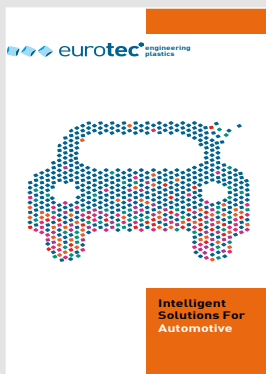
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SUKANO: BIO-MASTERBATCHES



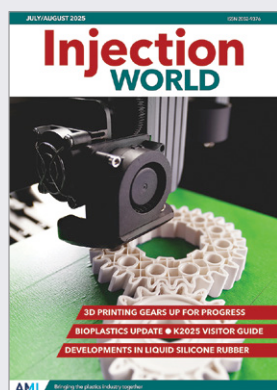
Switzerland's Sukano offers a full range of bioplastic masterbatches and compounds to allow processors to maximise the performance of bio-based resins such as PLA and PHA and to simplify and speed up processing.

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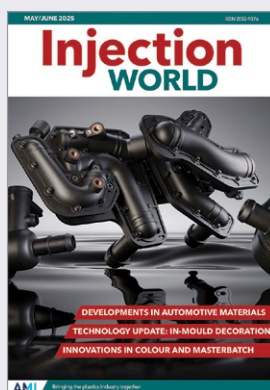
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Injection World July/August 2025

The cover story of the July-August issue of Injection World explores technology and materials helping to advance the 3D printing sector, and new bio-based polymers and LSR materials are the focus of other features.

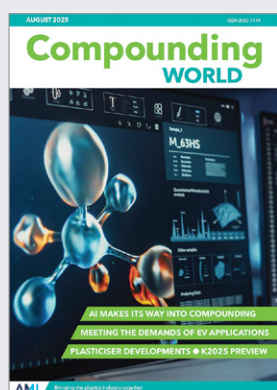
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Injection World May/June 2025

The May-June issue of Injection World magazine looks at leading materials companies innovating in automotive injection moulding, advances in in-mould decoration and developments in masterbatch.

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Compounding World August 2025

A new trend for AI to be used in compounding is the subject of the cover feature in the August issue of Compounding World magazine. Plus features on new materials in automotive applications and developments in plasticisers.

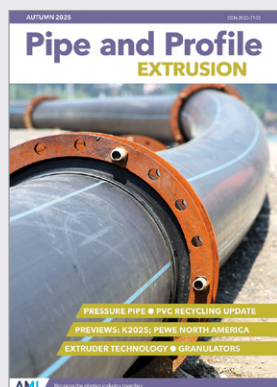
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Plastics Recycling World July/August 2025

The cover feature of Plastics Recycling World's July-August edition looks at EU regulation driving the use of recycled plastics in cars, while other features provide updates on chemical recycling and washing technologies.

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Pipe and Profile Autumn 2025

Pipe and Profile Extrusion's Autumn edition has a cover feature that looks at what's new in high pressure pipe, and features on PVC recycling, new granulators and extruder technologies, plus previews of K2025 and the US Plastics Extrusion World Expo.

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Film and Sheet July/August 2025

The cover story in Film and Sheet Extrusion's July-August edition checks out the latest in bio-based plastics and their applications, while other articles cover pouches, downstream equipment and how to prepare for visiting the K Show.

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Injection
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Plastics Recycling
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GLOBAL EXHIBITION GUIDE

2025	8-15 October	K2025, Dusseldorf, Germany	www.k-online.com
	3-6 December	PlastEurasia, Istanbul, Turkey	https://plasteurasia.com
2026	9-12 January	Plastex, Cairo, Egypt	www.plastexegypt.com
	20-22 January	Swiss Plastics Expo, Lucerne, Switzerland	https://swissplastics-expo.ch
	5-10 February	PlastIndia, New Delhi, India	www.plastindia.org
	10-12 March	JEC World, Paris, France	www.jec-world.events
	30 March - 1 April	Plast-Alger, Algiers, Algeria	www.plastalger.com
	31 March - 2 April	Plastics & Rubber Vietnam, Ho Chi Minh City	https://plasticsvietnam.com
	21-24 April	Chinaplas, Shanghai, China	www.chinaplasonline.com
	22-23 April	PlastTeknik Nordic, Malmö, Sweden	www.plasttechniknordic.com
	7-13 May	Interpack, Dusseldorf, Germany	www.interpack.com
	19-22 May	Elmia Polymer, Jönköping, Sweden	www.elmia.se/en/polymer

AMI CONFERENCES

15-17 September 2025	PVC Formulation Europe, Dusseldorf, Germany
16-18 September 2025	Single-Serve Capsules Europe, Malaga, Spain
11 November 2025	Performance Polyamides North America, Cleveland, USA
1-3 December 2025	Fire Resistance in Plastics, Dusseldorf, Germany
2-3 December 2025	Polyolefin Additives, Cologne, Germany
2-3 December 2025	Polymer Engineering for Energy, London, UK
3-4 December 2025	Refillable and Reusable Packaging, Berlin, Germany
11-12 February 2026	PVC Formulation North America, Cleveland, USA
10-11 March 2026	Single-Serve Capsules North America, Tampa, USA
5-6 May 2026	Fire Retardants in Plastics North America

For information on all these events and other conferences on film, sheet, pipe and packaging applications, see www.amiplastics.com

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