

03/2025

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# EXTRUSION INTERNATIONAL



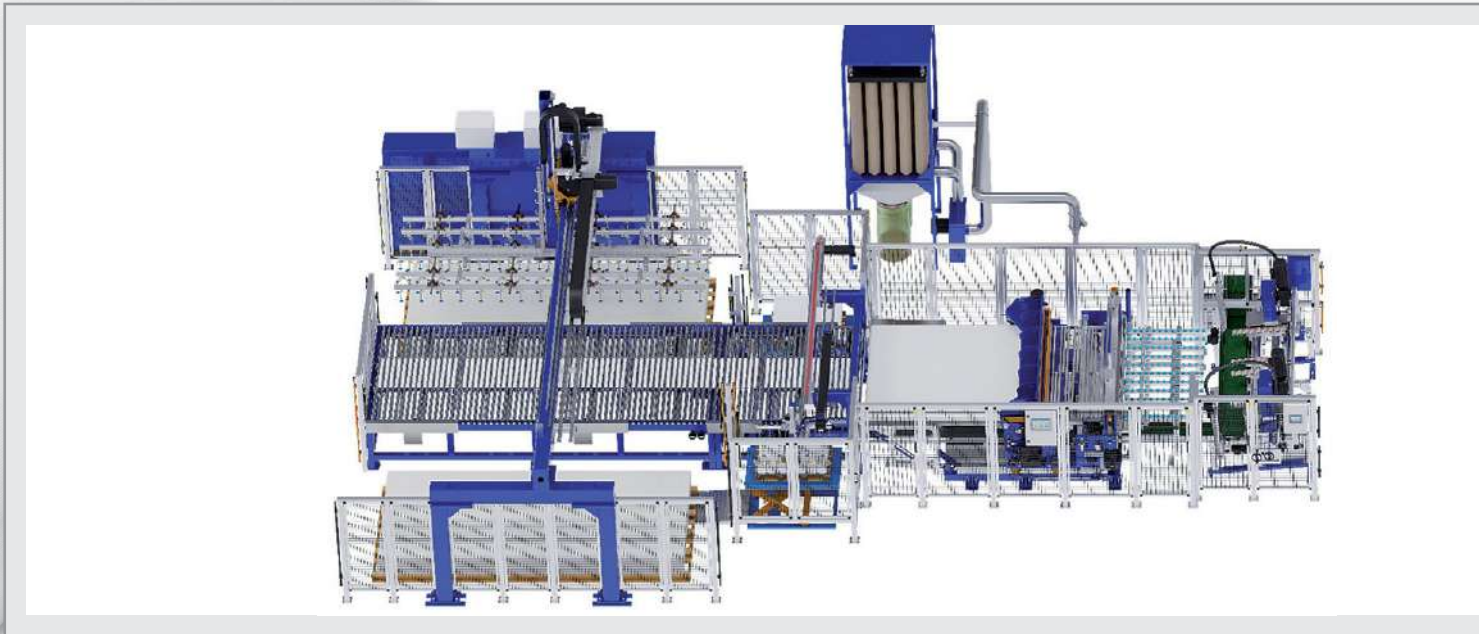


## Plate Stacking Machine

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CHINAPLAS 2025 attracted global attention from the plastics and rubber industries. Despite facing global economic challenges, the exhibition, spanning 19 halls with over 380,000 square meters of display space, was a major success, hosting over 4,500 exhibitors from around the world



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EREMA is expanding the portfolio of its ReadyMac plastics recycling system by introducing the new ReadyMac 500 "Heavy Duty" version. Thanks to the integration of the EREMA Laserfilter, this universal and cost-effective recycling machine is now also suitable for processing demanding post-consumer materials



35

Cabka GmbH & Co. KG in Weira is part of the Cabka Group, which became a listed company in 2022. As a pioneer in processing mixed plastics, recycling has been part of the company's DNA for more than 25 years. Lindner's Micromat HP supports the innovative company in creating sustainable products and impresses with its performance



36

Next Generation Recyclingmaschinen (NGR) announced a significant achievement: the European Food Safety Authority (EFSA) has issued a positive Scientific Opinion for NGR's Liquid State Polycondensation (LSP)- Process for advanced PET Recycling. This marks a ground-breaking milestone as LSP becomes the first recycling process to complete evaluation under the updated regulation (EU) 2022/1616

MDO-PE film manufactured on SML's latest cast film lines with integrated MDO unit provide excellent optical, mechanical and barrier properties. The film can be easily laminated to mono-material structures, for example with CPE sealant film on a FlexPack line from SML

Doğa PET, a new recycling venture by Doğa Holding, one of the largest conglomerates in Türkiye, is using TOMRAREcycling's sensor-based sorting solutions to produce high-quality PET flakes and rPET granules which are suitable for food and textile applications



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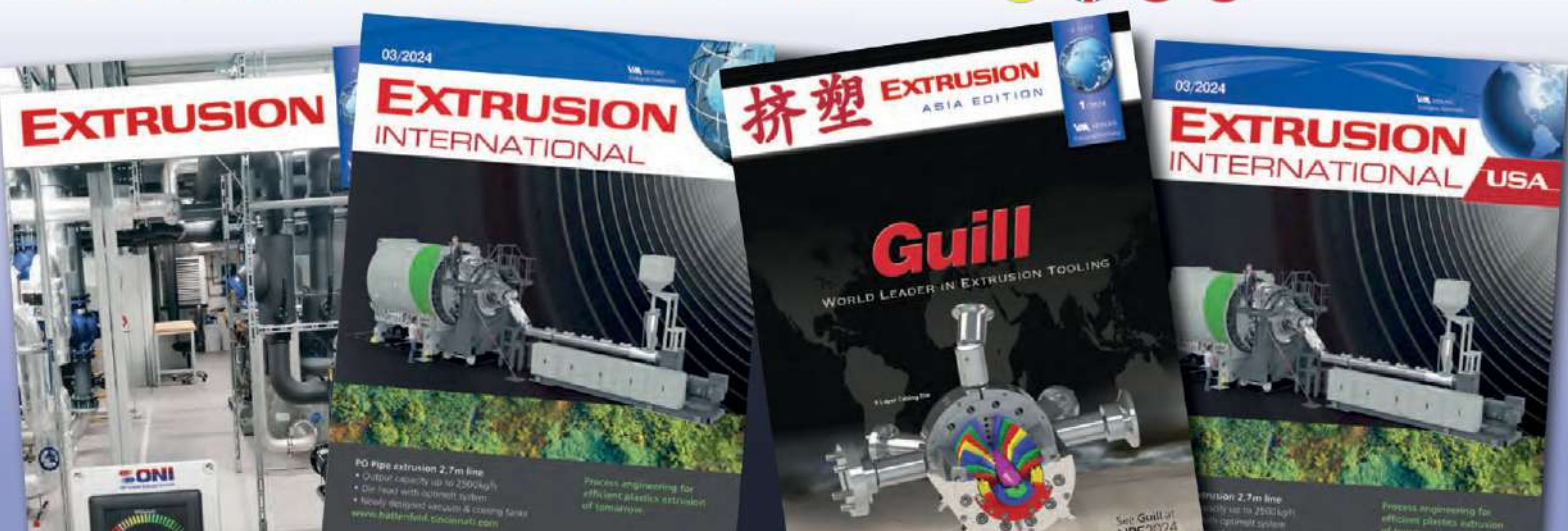
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# MEDIA DATA 2025

MAGAZINE · WEBSITE · NEWSLETTER

# EXTRUSION

EXPERT MEDIA ON PLASTICS EXTRUSION



03/2025

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# EXTRUSION INTERNATIONAL



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### National Plastics Conference

22 - 25 September 2025  
Orlando, FL / USA  
<https://e.plasticsindustry.org/>

### POWTECH TECHNOPHARM 2025

23 - 25 September 2025  
Nuremberg / Germany  
[www.powtech-technopharm.com](http://www.powtech-technopharm.com)

### K 2025

08 - 15 October 2025  
Düsseldorf / Germany  
[www.k-online.de](http://www.k-online.de)

### Vinyl Week 2025

10 - 12 December 2025  
New Orleans, LA / USA  
<https://e.plasticsindustry.org/>

### Swiss Plastics Expo

20 - 22 January 2026  
Luzern / Switzerland  
[www.swissplastics-expo.ch](http://www.swissplastics-expo.ch)

### World of Cables

13 - 17 April 2026  
Düsseldorf / Germany  
[www.wire.de/weltderkabel](http://www.wire.de/weltderkabel)

### interpack 2026

07 - 13 May 2026  
Düsseldorf / Germany  
[www.interpack.de](http://www.interpack.de)

### Interplas 2026

02 - 04 June 2026  
Birmingham / United Kingdom  
[www.interplasuk.com](http://www.interplasuk.com)

### Equiplast

02 - 05 June 2026  
Barcelona / Spain  
[www.equiplast.com](http://www.equiplast.com)

### Fakuma 2026

13 - 17 October 2026  
Friedrichshafen / Germany  
[www.fakuma-messe.de](http://www.fakuma-messe.de)



## K 2025 – *Focusing on the Transformation of the Plastics Industry*

At K 2025 from 8 to 15 October in Düsseldorf the official Special, Plastics shape the Future, will discuss and reveal how the plastics industry shapes the transition to more sustainability, digitalisation and social responsibility. Organised jointly by Plastics Europe Deutschland and Messe Düsseldorf the special show will provide insights into the current state and perspectives of transformation: featuring different focal topics every day, discussions with high-ranking representatives from political and scientific spheres and NGOs, innovative start-ups and industry experts – accompanied by interactive expert talks, round tables, guided tours of the trade fair and networking opportunities at the Startup Pitch, Science and Poetry Slam and the "Women in Plastics" event.

Overview of the seven theme days:

1) Kick-off Wednesday – The Power of Plastics (8 October): Wednesday is all about competitiveness and sustainability and will be kicked off by the opening with representatives from political spheres, business and international associations.

2) Circular Thursday (9 October): On Thursday everything will revolve around circularity: moderated by Prof. Manfred Renner (Fraunhofer UMSICHT/CCPE) experts will shed light on circular-ready product de-

sign, regulatory challenges and circular business models in packaging, textiles, electronics, construction and automotive.

3) Climate Friday (10 October): Friday will focus on climate protection and CO<sub>2</sub> reduction.

4) Smart Saturday (11 October): On Saturday digitalisation and artificial intelligence will be centre-stage.

5) Career Sunday (12 October): Career Sunday will focus on people. Be it in recruiting through new channels via gaming or diversity, at two book presentations or the Science and Poetry Slam; not forgetting the networking event "Women in Plastics"

6) Innovation Monday (13 October): Monday is reserved for start-ups and science: in two pitch sessions emerging companies will introduce themselves with solutions for recycling, digitalisation, material development and organic plastics.

7) Visionary Tuesday (14 October): The last but one day of K 2025 looks ahead of time – Plastics 2050: circular design, bio-based raw materials, CCU and the avoidance of micro plastics will be crucial topics.

The programme will be predominantly in English.



## "Women in Plastics" to Debut at K 2025 in Düsseldorf

When women network with each other they can benefit themselves and, at the end of the day, the whole sector. K 2025 brings international female industry players together in a targeted manner at the trade fair. Under the heading "Women in Plastics" an event for the women in this industry will be held for the first time here. Serving as a venue will be the special show Plastics Shape the Future, organised by Plastics Europe Deutschland. "Like many other sectors the plastics and rubber industry is still predominantly male. In particular, female leaders are still rare. Even though companies benefit from more diversity, fresh impulses and different perspectives not least also in view of the increasing shortage of skilled labour. "Women in Plastics" at K 2025 wants to draw attention to barriers women face but above all move this sector into focus as an attractive workplace," says Bettina Dempewolf, Head of Communication at PlasticsEurope Deutschland e. V. looking forward to the event.



Stephanie Kalil (Copyright: Dow)

Stephanie Kalil, Commercial Vice President EMEA Packaging & Specialty Plastics at Dow has been named keynote speaker. She is responsible for developing and driving the P&SP net zero and business growth strategy, particularly Dow's circularity and decarbonization efforts in the region. Prior to this role, Stephanie Kalil was the Senior Global

Business director for the polyethylene business at Dow. Kalil holds a Bachelor in Business Administration with a specialisation in international business from Michigan State University (MSU) and completed the Advanced Management Program at Harvard Business School. She is a passionate advocate for the Women's Innovation (WIN) employee resource group in Dow and promotes greater representation of women in technical and leadership roles.

The agenda of "Women in Plastics" at K 2025 features not only the keynote but also a panel discussion, best-practice examples presented by top-notch female speakers from all over the world as well as the possibility for in-depth, face-to-face networking.

"Women in Plastics" will be held at K 2025 on 12 October 2025 at 4.00 pm as part of the special show "Plastics shape the Future" in Hall 6.

Free registrations are already possible at the following link:

➔ [www.k-online.de/women-in-plastics](https://www.k-online.de/women-in-plastics)

## World of Cables

From 13 to 17 April 2026, wire Düsseldorf will once again be the international hot spot for industrial news and technological trends in wire and cable technologies. As a global industry hub, it is expanding its offering for the first time to include the special section World of Cables in Hall 13, featuring the end product cable, which is indispensable for any functioning infrastructure.

Whether in the context of the energy sector's transformation to renewable energies, broadband expansion, urbanisation or digitalisation, cables are the silent, indispensable heroes of global industries.

Their quality, performance and reliability are key determinants of the efficiency of entire systems. The special section World of Cables puts these end products in the spotlight and impressively demonstrates their



key role in challenging applications – from high-voltage cables to fibre optics, automation and telecommunications.

Trade visitors will gain a comprehensive overview of modern applications, new materials, intelligent cable systems and innovative connection technologies. Topics such as sustainability and recyclability play a prominent role.

At wire 2026, international market leaders and specialised suppliers

(Copyright: Messe Düsseldorf / cttillmann)

will present their products, solutions and visions for the future of cable technology. The programme will be complemented by forums, technical presentations and live demonstrations that promote dialogue between manufacturers, users and researchers.

➔ [www.wire.de/weltderkabel](https://www.wire.de/weltderkabel)

## Barrier Laminates – The Expert Meeting 2025

On July 1 and 2, 2025, INNOFORM invites you to the renowned "Barrier Laminates – The Expert Meeting" at the SKZ Model Factory in Würzburg, Germany. The conference focuses on mono-materials, innovative manufacturing processes, and barrier coatings for films and paper. Participants will gain valuable insights into key sustainability topics and the most important innovation drivers in the field of barrier films.

### Key topics

- New Materials: Biopolymers and fiber-based alternatives such as paper for barrier films

- Innovative Processes: Triple-bubble stretching, MDO stretching and simultaneous stretching for recyclable mono-materials with excellent barrier properties

- Efficient Barrier Coatings: What do they offer and when is it worth

switching to alternative materials such as bioplastics or paper?

New is the AI-supported simultaneous translation (German-English) – Audio & subtitles in the livestream for an international audience.



## Plastics for Packaging Films

9. September 2025, Online

This crash course aims at newcomers and those who are just starting in manufacturing, processing and in the packaging film industry (with a focus on food). You will gain a basic knowledge on film technology and related material science. The focus is

on a sound foundation. Part A deals with the fundamentals of polymers used for plastics films. The focus is on making the link between polymer architecture (how polymers are built) and the real optical and mechanical properties. For example, the degree of crystallinity provides information about the transparen-

cy and density of a semi-crystalline plastic. In addition, simple chemical facts about plastics are also explained to beginners so that they can later understand many phenomena theoretically in practice.

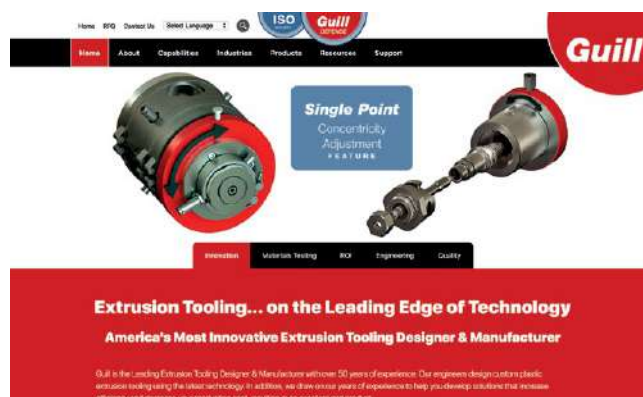
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## Newly Designed, Informative Website Released

Guill Tool & Engineering, West Warwick, Rhode Island (USA), world leader in extrusion tooling design and manufacturing, has unveiled a new website. This new site offers a detailed look at the company's entire product line, which offers a wide-range of standard and custom designed extrusion tooling, including cross-heads, in-line heads, rotary heads and extrusion tips & dies. Highlight among the new products is the inline Spiderless Pipe Die, unique in the world market currently for its design efficiency and process performance on small to medium sized plastic pipe.

The site includes a full listing of all products and specifications with calculation tools to compute annual cost of lengthy concentricity adjustments and crosshead replacement analysis, plus calculators to compute draw-down, feet per minute and pounds per hour, making extrusion production scheduling and estimating far more accurate and efficient. The website also includes charts and tables with detailed data and a full library of downloadable literature organized by industry and tool type. Guill markets its equipment worldwide and is currently seeking new representatives in select countries.



The Guill website is mobile phone friendly and offers the convenience of allowing users to request a quote online.

For more information:

Tom Baldock, Extrusion Sales Manager  
Guill Tool & Engineering  
[sales@guill.com](mailto:sales@guill.com), [www.guill.com](http://www.guill.com)



## 30th Fakuma in Fall 2026

Fakuma 2026 will be an anniversary event, and it's already arousing great interest a year and a half in advance: two thirds of all available booth floor space has already been reserved for the 30th international trade fair for plastics processing, which will take place from the 12th through the 16th of October, 2026. The exhibitors and the trade fair promoters are already promising a world-class, multifaceted supplementary programme for this industry highlight in Friedrichshafen.

"Even now, roughly 18 months before it opens, everyone is talking about Fakuma's anniversary edition and interest is tremendous," says Annemarie Schur, Fakuma project manager at trade fair promoters P. E. Schall. "Two thirds of all available exhibition floor space has already been booked. And all the industry's major players will be back again next year. The good booking levels provide a strong basis for all involved parties to once again organise a world-class, lively trade fair with an outstanding supplementary programme.

The highly specialised community of experts in the plastics processing industry is focused on further technological developments in the key areas of efficiency, digitalisation, cost-effectiveness and sustainability. The path to this goal leads directly to a circular economy. 1639 exhibitors provided fresh impetus



for pressing issues, both current and future, at the last Fakuma in October 2024. The large proportion of exhibitors from outside of Germany (47.5%) once again underscored Fakuma's high levels of internationality and its significant global standing. Many companies reserved their booth locations for the 30th Fakuma in 2026 and the 31st Fakuma in 2027 immediately after the event.

In the fall of 2024, Fakuma's trade fair promoters and exhibitor advisory board agreed on a new event schedule running from Monday through Friday. This decision was preceded by an exhibitor survey, in which the majority voted in favour of the change. The 30th Fakuma will thus take place from Monday the 12th through Friday the 16th of October, 2026, from 9 a.m. to 5 p.m. each day. Exhibitors, expert visitors and guests will once again transform the Friedrichshafen Exhi-

bition Centre into the focal point of a grand family celebration. "Bookings are going strong because the plastics industry is already looking forward to the traditional gathering in Friedrichshafen," says the project manager. "We're picking up where we left off with the inspiring events that accompanied the trade fair in 2024 and will be offering a comprehensive, well-rounded supplementary programme again next year," promises Annemarie Schur. "Amongst other features, the exhibitor forum, the round-table talks and career day helped establish valuable contacts and generated ground-breaking impetus at many levels. In 2026 as well, an attractive trade fair programme will accompany the exhibition. We're already looking forward to Fakuma's anniversary edition in 2026."

► [www.fakuma-messe.de](http://www.fakuma-messe.de)

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## K, interpack and drupa on Expansion Path in the Middle East

The industry's leading trade fairs, K, interpack and drupa, are further expanding their international reach by jointly entering the Saudi Arabian market. This step is made possible by the expanded partnership between Messe Düsseldorf and the Riyadh Exhibition Company. The Saudi Plastics & Petrochem and Saudi Print & Pack exhibitions will be expanded to include regional editions of K, interpack and drupa.

Saudi Arabia is currently showcasing the dynamic and diverse development of the Middle Eastern economy. From May 12 to 15, the Riyadh Exhibitions Company (REC) hosted the Saudi Plastics & Petrochem and Saudi Print & Pack trade shows, featuring over 500 exhibitors from the petrochemical, plastics, print, and packaging industries. The flourishing trade fair quartet, whose exhibitor numbers have climbed by 70 percent since 2018, offers plenty of perfect touchpoints for Messe Düsseldorf. HRH Prince Saud Turki Al Faisal Bin Abdulaziz, Chairman of REC, and Wolfram N. Diener, President & CEO of Messe Düsseldorf, have signed a Memorandum of Understanding to integrate Düsseldorf's world-leading



trade shows K, interpack and drupa into future Saudi Plastics & Petrochem and Saudi Print & Pack events.

For decades, K, interpack, and drupa have stood for innovation, international appeal, and strong momentum in their respective sectors. Today, they continue to embody these values as they join forces in Saudi Arabia – a market with high growth potential – to harness synergies and create added value. Their

new presence in Riyadh is a strategic addition to Messe Düsseldorf's global portfolio: 'K Global Gate', the 'interpack alliance', and 'drupa global' represent international reach across plastics and rubber, processing and packaging, and print technologies.

Messe Düsseldorf GmbH

➔ [www.k-online.de](http://www.k-online.de)

➔ [www.interpack.de](http://www.interpack.de)

➔ [www.drupa.de](http://www.drupa.de)

## Acquisition

SIKORA is setting the course for the future. SIKORA gains a strong strategic partner for the future and becomes a member of the Swiss MAAG Group. The MAAG Group is a leading international group of companies for integrated solutions in polymer processing and part of the Dover Corporation.

Harald Sikora, Managing Director of SIKORA HOLDING GmbH & Co. KG, founded the company SIKORA in 1973. Since then, SIKORA has continuously developed, opened up new markets and has grown steadily. With around 450 employees in Bremen and its 13 international subsidiaries, the company offers innovative solutions and customized customer service.

"With the MAAG Group, we have found our ideal partner for the future," summarizes Harald Sikora and is confident that the company is in capable hands: "SIKORA and MAAG are connected by more than just a strategic goal: we share core values - innovative strength, entrepreneurial spirit, sustainable thinking and the clear pursuit of long-term success. We are therefore convinced that in the MAAG Group we have found the right partner for further growth and to continue our success story together."

Commenting on the acquisition, Ueli Thuerig, President MAAG Group, said, "SIKORA's outstanding products address similar customer needs in resin-related markets



Ueli Thuerig, President MAAG Group

to ours, and its offerings provide MAAG with increased exposure to highly-attractive market adjacen-



cies where we have existing industry knowledge and customer relationships. Our shared capabilities and go-to-market strategies will generate material cross-selling benefit with a highly complementary portfolio of products and technologies, deepening our joint value proposition and integration with our OEM partners and end customers."

The cooperation between the MAAG Group and SIKORA opens up a wide range of technological and geographical synergies. SIKORA's expertise in measuring and control technology ideally complements the MAAG Group's portfolio in the areas of pump, filtration and pelletizing systems. The regional proximity also offers advantages: Both companies are represented with strong locations in the DACH region and are broadly positioned internationally. This results in valuable, shared strengths and the opportunity to provide customers with even more comprehensive support and offer new solutions.

In the new constellation, company founder Harald Sikora will remain associated with SIKORA AG in an advisory capacity. The partners also rely on continuity with regard to the operational management at SIKORA. The long-standing Management Board of SIKORA AG will continue to be responsible for the company's growth story in the future. CEO Dr. Christian Frank has been a member of SIKORA's Management Board for 12 years and has been Chairman of the Management Board since 2015.



*Dr. Christian Frank, CEO SIKORA AG*

Holger Lieder has been working in sales at SIKORA for 21 years and took over the position of Director

Sales with responsibility for global sales in 2010. In 2023, he was appointed to the Management Board of SIKORA AG.

Dr. Christian Frank, CEO of SIKORA, adds, "The partnership with the MAAG Group is a strong sign for our future: for SIKORA, for the Bremen location, and for our global team. We have achieved great things over the past decades. Now a new chapter is beginning in which we can contribute our strengths and continue to grow with MAAG. For our employees, this transaction means security, new perspectives, and the opportunity to continue our success story together."

The transaction is subject to customary closing conditions, including receipt of regulatory approvals and is expected to close in the second quarter of 2025.

**Maag Group**

www.maag.com

**SIKORA AG**

www.sikora.net

## Management Update

EREMA has appointed a long-time employee as Global Sales Director: Christoph Wöss, previously Business Development Manager for the Bottle division, took over the newly created position within the EREMA management team on April 1, 2025.

"With Christoph Wöss, we have gained a highly competent and experienced expert from within our own ranks, who has made a significant contribution to the successful development of EREMA in recent years. I am pleased that in his new role he will further professionalise our global sales allowing us to respond even more effectively to the needs of our customers in the various markets," says Manfred Hackl, Managing Director of EREMA and CEO of the EREMA Group.

Christoph Wöss has been part of the EREMA Group for 24 years and possesses in-depth market knowledge. With his extensive experience, he is well-versed in the international markets and the specific requirements of the plastic recycling industry. In his new role, he will manage EREMA's global sales activities and drive the company's strategic development in the global market. In this context, Christoph Wöss will lead the international sales team and work closely with EREMA's global subsidiaries to strengthen the company's market presence.



*Christoph Wöss  
(Copyright: EREMA GmbH)*

**EREMA Group**

www.erima.com

## New Office in Shanghai Opened

ECI Group, a world-leading technology licensor and engineering services provider for the polyolefins industry, celebrated the opening of its new office in Shanghai. This expansion marks a significant milestone for the company as ECI Group continues to expand its licensing and service delivery capabilities.

"We are thrilled to open our new office in Shanghai," said Joaquin Flores, President and CEO of ECI Group. "China is ECI Group's most important market. Earlier this week, we agreed a new license that takes our total licensed capacity in China to over one million tonnes of LDPE, EVA, EnBA and other high-value copolymer products since we launched our proprietary technology in 2021. Our new base in Shanghai will allow us to not only provide better support to our licensees in China, but also expand our consultancy services and Professional Technical Services offerings to other operating customers in the region."

The Grand Launch Ceremony for the office was held on 9th April 2025. Over 90 delegates from petrochemical companies across China, as well as key equipment suppliers and other partners attended the opening event, with speeches and presentations followed by a lunch banquet.



*Representatives from ECI Group's ownership and Board of Directors, Chris Brock (Vice President and Director of High-Pressure Business Unit), Bob Armstrong (Chairman), Dennis Radford (Chief Technology Advisor), and Jay Jacobs (CFO), cut the ribbon to officially open the new office*

Representatives from ECI Group's ownership and Board of Directors, cut the ribbon to officially open the new office.

"Today marks a significant milestone for our company as we open the doors to our new office," said Bob Armstrong, Chairman of ECI Group. "This space represents not just a physical expansion, but a testament to our growth, innovation, and commitment to excellence."

We are excited to foster collaboration, creativity, and success in this new environment. Together, we will continue to achieve great

things and drive our vision forward."

ECI Group's new office will provide technology and engineering support services to local customers. ECI Group's Consultancy Services division will also expand into the Shanghai office, providing specialist consultancy services to the polyolefins sector in China: delivering technology support and plant optimization services to help operators achieve their safety, profitability, and sustainability goals.

ECI Group

➡ [www.ecigrouponline.com](http://www.ecigrouponline.com)

## Certification Achieved

Teknor Apex has achieved RecyClass Recycled Content Certification, which certifies the company's thermoplastic elastomer products that contain recycled content. Audits were performed by the Dutch certification agency Kiwa in Genk, Belgium, and Rothenburg ob der Tauber, Germany, for the Sarlink® Rx 4100B series of TPVs and the Monprene® R6 CP-10100 series of TPEs.

RecyClass is a European initiative that advances the recyclabil-



(©AdobeStock 650198958)



ity of plastic packaging by providing guidelines, certification, and testing to help companies design packaging that is compatible with existing recycling systems. These certifications help brands, manufacturers, and recyclers ensure that their packaging aligns with circular economy principles and meets recognized industry standards. Specifically, the RecyClass Recycled Content Certification achieved by Teknor Apex:

- Verifies the percentage of recycled plastic content in the products
- Ensures traceability and compliance with ISO 22095 and EN 15343 standards
- Confirms that recycled materials come from legitimate and certified sources

Teknor Apex chose RecyClass certification to demonstrate its ongoing commitment to supporting the circular economy. Unlike other

certifications with broader scopes, RecyClass focuses exclusively on the recyclability of plastic packaging and the traceability of recycled plastic content, with assessments tailored to the complexities of plastic recycling. In addition, RecyClass is strongly aligned with European Union regulations and initiatives.

**Teknor Apex Group**  
[www.teknorapex.com/corporate-sustainability](http://www.teknorapex.com/corporate-sustainability)

**Zumbach**  
 SWISS PRIME MEASURING SINCE 1957



**RAYEX® S**

## Static X-Ray Measuring System

### Benefits:

- ✓ All in one! Complete system for precision measurement of wall thickness, ovality, eccentricity and diameter.
- ✓ Simultaneous measurement with two measuring axes on up to 4 layers.
- ✓ Allows for easy customer creation of new product recipes with new product parametrization.
- ✓ State of the art connectivity with integrated Profinet IO, Ethernet TCP/IP, EtherNet/IP, or OPC UA communication protocols.
- ✓ Minimum maintenance requirement.



**4**  
 Min. object  
 diameter (mm)

**100**  
 Max. object  
 diameter (mm)

**up to 15**  
 Scan rate  
 (scans/s)

## New Building Creates Space for Project Planning and Development

Hellweg Maschinenbau is well equipped for the market recovery in this sector. Although the current dark clouds over the recycling world mean that the previous two years' record sales cannot be expected in 2025, managing director Mark Hellweg sees innovative ideas and the outstanding cost-effectiveness of his granulator range as proven pillars that will continue to support success once the economy picks up. The company recently moved into its new administration building at its headquarters in Roetgen to create ideal conditions for grasping the opportunities when they arrive. A total of 300 m<sup>2</sup> of usable space now offers a comfortable environment for developing new projects and bringing them to fruition.

"We have consistently digitalized our plastics shredding systems and slimmed them down to achieve unprecedentedly low energy consumption", explains Hellweg. "Over the last two years, we have been able to reap the rewards of this development work. Ever more users have been convinced by high levels of efficiency combined with the long service life of all installed components, and this combination will in future continue to be the foundation for securing a prominent position in the sector."

In order to be able to follow this path, the company has not only expanded its premises but also increased its staff. For example, Dirk Nebel joined the team as a project engineer a few weeks ago. Hellweg has also switched product development to one of the most powerful CAD programs currently available and plans to introduce a new ERP



*"We're certain Hellweg Maschinenbau's new ideas factory in Roetgen, which we moved into in late 2024, creates space for successful further expansion" says managing director Mark and Susanne Hellweg (© Hellweg Maschinenbau)*

system this year. "We're continuing to focus on innovation and, above all, on digitalization, both of the company and its products", adds Hellweg. "We also want to open up new markets, which is why we will be demonstrating the particularly energy-efficient and low-dust operation of our shredding systems in areas other than just plastics."

Hellweg's portfolio includes robust, durable granulators for every plastics application, from small machine-side granulators for sprues up to high-performance systems for solid parts, film and sheet with throughputs of five metric tons per hour and above. All models are equipped with the digital Smart Control system developed by Hellweg which captures parameters such as power consumption, motor

speed and bearing temperatures, as well as blade, screen and V belt status. The system is also capable of continuously optimizing the ratio between engine load and throughput. The result is particularly economic operation combined with minimal effort for operating personnel. Hellweg granulators' special cutting geometry produces low-dust regrind of consistently high quality and with the perfect particle size distribution and geometry for further processing. This range is complemented by edge strip shredders and servomotor-driven edge trimming systems for film or sheet production.

Hellweg Maschinenbau GmbH & Co. KG  
[www.hellweg-maschinenbau.de](http://www.hellweg-maschinenbau.de)

[www.smart-extrusion.com](http://www.smart-extrusion.com)



## Enhanced Partnership Announced

Nordson BKG and FIMIC announced a deepened strategic partnership, building on FIMIC's appointment as the exclusive agent for Nordson BKG® products in Italy announced in January 2025.

This enhanced collaboration marks a significant step in developing advanced technologies designed to revolutionize plastics processing and recycling. While specific details of the partnership remain confidential, the two companies are jointly developing groundbreaking solutions to address the evolving challenges within the plastics industry.

"This strategic partnership with FIMIC allows us to leverage our combined expertise and resources to accelerate innovation and deliver unparalleled value to our customers," said Sven Conrad, Global



*Erica Canaia (FIMIC CEO), Sven Conrad  
(Nordson BKG Global Segment  
Development Director)*

Segment Development Director, Nordson BKG. "We believe this collaboration will transform the landscape of plastics processing and recycling, resulting in more sustainable and efficient solutions."

Erica Canaia, CEO of FIMIC Srl, added, "Building upon our existing relationship with Nordson BKG, this deeper partnership marks a crucial step toward developing cutting-edge technologies that will address the growing demands of the plastics industry. We are excited to unveil the results of our collaboration at K 2025."

Fimic Srl.

➡ [www.fimic.it/](http://www.fimic.it/)

**K 2025: Hall 9, Stand D18**

Nordson BKG GmbH

➡ [www.nordsonpolymerprocessing.com](http://www.nordsonpolymerprocessing.com)

**K 2025: Hall 9, Stand D09**

## New Leadership Team

Lindner Washtech, based in Feistritz/Drau, Austria, and Großbottwar, Germany, is renowned worldwide for its complete systems that incorporate the shredding, sorting, washing and drying of a wide range of plastic types. An industry leader with more than 200 washing systems installed around the world, in the past few years the company has predominantly focused on optimising the process along the value-added chain and new concepts for cleaning methods. With the goal of optimising the entire process chain in plastics recycling, a collaboration was initiated with the Erema Group. The close cooperation between Lindner Washtech and Erema since the start of 2023 has already produced significant process optimisations.

Besides the technical progress, a new chapter has also begun at Lindner Washtech at the managerial level. Harald Hoffmann, founder, visionary and driving force, passed on sole management of the company in January 2025 to Georg



*Harald Hoffmann (right), hands  
over sole management of Lindner  
Washtech to Georg Krenn (left),  
who has been leading the technical  
division as managing director until now  
(Copyright: © Lindner Washtech GmbH)*

Krenn, who has been Managing Director at Lindner Washtech Engineering for the past 10 years. "In Georg Krenn, the company gains an experienced manager who has worked at Lindner Washtech since

the very start. As Head of the Research and Development department he co-developed a substantial part of our product portfolio and knows our customers and the global recycling market extremely well," Harald Hoffmann explains. Hoffmann himself will be supporting customers around the world together with the sales team and continue to advance Lindner washing systems and lines with regard to process optimisation, equal and upcycling. "Harald Hoffmann has sustainably shaped the plastics industry with his ideas and strategic direction, driving the positive development of the brand," says Manuel Lindner, owner and recycling pioneer for the company of the same name. "We are delighted that Harald will continue to be a permanent part of our team with his expertise and knowledge of the market in his role of Senior Advisor Global Sales."

Lindner Washtech GmbH

➡ [www.lindner.com](http://www.lindner.com)

## With Industry 4.0 to Setup Process 2.0

In the XRAP research project, Simplifier AG and XRify GmbH are developing a digital assistant for set-up processes together with the SKZ Plastics Center. With the combination of artificial intelligence (AI) and extended reality (XR), employees are supported in real time during set-up processes. In view of the considerable amount of time required for set-up processes and the many sources of error, XR-supported optimization can result in considerable economic benefits.

Innovation occurs when theoretical knowledge is translated into practical applications. The XRAP research project is developing a digital assistant that will revolutionize industrial setup processes by combining XR and AI. The following functionality is planned: An employee holds a tablet in their hand. The tablet highlights in color which components are required for the next step in the setup process. The XR glasses are then put on and a detailed virtual display appears directly in the employee's field of vision, showing where a part needs to be fitted. In addition, further information on the current work step and component can be added, e.g. from an operating instruction. At the end, employees receive feedback on whether the parts have been installed correctly or whether any reworking is required. The digital assistant guides them step by step through the entire set-up process and enables errors to be identified and rectified at an early stage. The XRAP project aims to bring this future scenario one step closer and thus revolutionize the current status quo in set-up processes.

In January 2025, the joint project "XR Assistant for Setup Processes in Production" (XRAP) was launched as part of the "Future of Value Creation – Research on Production, Services and Work" funding measure of the "Future of Value Creation" program of the Federal Ministry of Education and Research



(BMBF). The project is scheduled to run for two and a half years and aims to develop a digital, XR-based assistant to support the setup of machines. One of the use cases for this project is set-up processes in the compounding or extrusion of plastics. The low-code platform from Simplifier AG serves as the technological basis for the development of the application. XRify GmbH is contributing its expertise in XR - particularly with regard to interaction with the user. The SKZ is responsible for the process analysis, requirements definition and development of the AI. By combining XR technology and AI, the digital assistant developed as part of the research project will be able to monitor the setup process and provide support in real time. This will prevent errors and save time.

Understanding setup processes is crucial to the success of a project. The digitalization of these processes requires an in-depth technical understanding of the processes as well as precisely defined requirements for the development of the digital assistant. With its close ties to the plastics industry, SKZ has extensive knowledge of set-up processes and understands the specific challenges that employees are

*Rethinking set-up processes with AI and XR (Source XRify GmbH/Philipp Hummel)*

confronted with here. On the one hand, this process knowledge enables the targeted development of the assistant's AI-supported object recognition. On the other hand, it is crucial for tailoring the XR system to the needs of the employees. To this end, XRify contributes its experience from the application of XR-supported processes in industry. Only when relevant information is available at the right time and in the right place can real added value be created for companies and their employees. The results of the research project are not limited to the plastics industry, but can be transferred to all other industries thanks to the flexible structure of the software designed by Simplifier. The AI-based setup assistant supports skilled workers directly on site, reduces errors and speeds up processes – a decisive step towards intelligent and digitally networked production in Industry 4.0.

The SKZ Plastics Center  
Mingo Kübert,  
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## New ASM Appointed

Danish company Vetaphone, the inventors and pioneers of corona surface treatment technology, have announced the appointment of Bo Eriksen as Area Sales Manager for Europe and Africa.

Educated and trained as an Electronics Engineer, he was honoured by the Danish Engineering Union for outstanding achievement in his Journeyman Certification before serving in the Danish army in its Electronic Warfare Division.

He joined Vetaphone in 2006 in a service capacity prior to moving on to system installations and after sales customer support, and now finally into sales. He commented: "I am excited to be of part of the

Sales Team and believe my product knowledge and technical background from many years in the field supporting customers will assist our sales force on its continued path of success."

Speaking for Vetaphone, CSO Kevin McKell commented: "Bo has been a valuable member of the Vetaphone team for many years and I am delighted that he is now bringing his talents to Sales. His extensive technical knowledge will be of great benefit to the Vetaphone users in his area and I'm expecting great things!"

Vetaphone will continue to be represented by Dirk den Haese in Benelux, Ahmed Türkmen in DACH, and Giuseppe Rossi in Italy.



*Bo Eriksen has been appointed ASM at Vetaphone*

Vetaphone A/S

[www.vetaphone.com](http://www.vetaphone.com)

## Major Efficiency Improvements in PVC Recycling

At its factory in the Barcelona region, Renolit manufactures high quality flexible PVC films. Thanks to its innovative SFneos Filtration System from Gneuss – the latest addition to its range of process-constant, continuous screen changers, Renolit is now able to reuse a significant percentage of recycled material without any compromises regarding product quality or production efficiency.

*Customized SFneos screen changer for Renolit*



The flexible PVC films made by Renolit are coated on to polyester and in spite of separating processes, the scrap still contains a small amount of residual polyester. This is sufficient to cause problems with conventional slide plate screen changers – the frequent changes due to the contamination load result in production interruptions and flow disturbances which, with flexible PVC lead to frequent burn-ups.

The SFneos screen changer supplied to Renolit by Gneuss was extensively customised to exactly match the twin screw extruder, with extremely short and streamlined flow paths, designed with the help of flow simulation software.

The SFneos operates continuously and pressure-stable, even with high and varying contamination loads.

Thanks to these performance characteristics of the SFneos, Renolit was able to process a high percentage of recycling containing residual polyester without production interruptions and were therefore able to significantly increase the yield and efficiency of their existing extrusion line without compromising their product quality. At



*SFneos Filtration System in the production line of PVC film at Renolit*

the same time, by using waste material (and this material is generally seen as difficult to recycle) Renolit is saving valuable resources.

On post industrial recycling applications, the Filtration Systems from Gneuss can play a decisive role in unlocking potential, making processes more cost-efficient and contributing toward sustainability.

Gneuss Kunststofftechnik GmbH

[www.gneuss.com](http://www.gneuss.com)

## Closed Loop: How Often can the Material Travel in a Circle?

While mechanical recycling has long been established, new processes such as solvolysis and other chemical recycling processes raise many questions – and offer great opportunities. Legal requirements and customer expectations are increasing the pressure on the industry. The SKZ is actively pursuing these challenges – in research as well as in training and further education.

Material recycling is widespread in the plastics industry – the re-melted sprue saves raw material costs and conserves resources. However, traditional remelting has its limits: Material changes and the accumulation of foreign substances mean that plastics cannot be recycled as often as required. The legal definition of “recyclate” (Section 4 (1) KrWG) is also becoming increasingly precise and calls for more advanced solutions.

When filtration and degassing are no longer sufficient, new approaches are needed. Recycling processes based on physical principles such as the dissolution of polymers offer promising alterna-



*Advanced recycling is attracting great interest  
(Source: Adobe Stock  
1034260904/Nattapun)*

tives here. Chemical processes that break down polymers into oligomers or even monomers are also increasingly coming into focus. However, research in this area is still in its infancy in many places – as is the transfer of knowledge.

Research at SKZ: Recycled materials from textile fibers and PET bottles

At the SKZ Plastics Center, research is being conducted into solvolysis processes under the leadership of Theresa Forster, Scientist Compounding and Extrusion. These enable the depolymerization of

polyesters – not only from PET bottles, but also from textile fibres.

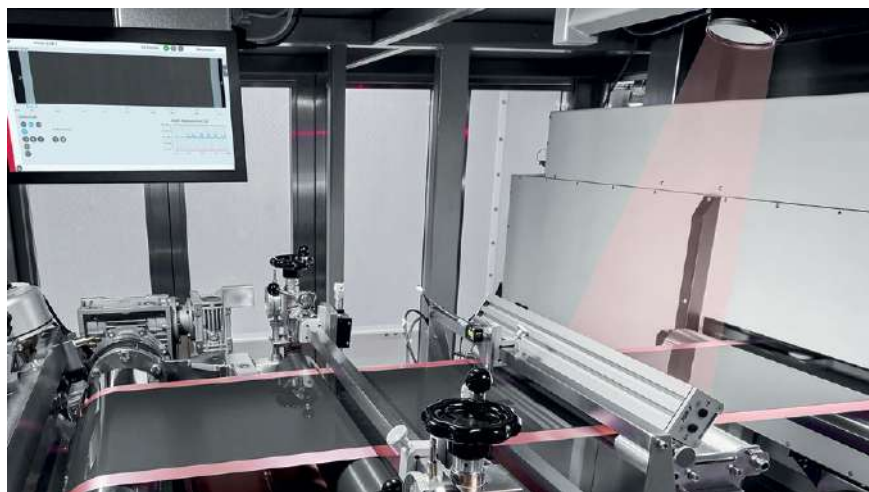
“Our aim is to develop new raw material sources for polyol-based adhesives,” says Forster, who is investigating how such processes can be continuously transferred to extruder screws as part of the IGF project ‘RezyBond’ (“PET recyclate as a multifunctional raw material for polyol-based adhesives”, funding code 01IF22951N).

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## Innovative Solutions for the Optimization of Web-Processing Processes

Increasing demands on quality, efficiency and sustainability are driving digitalization in the web-processing industry. At ICE Europe 2025 in Munich, BST presented innovative solutions to make production processes smarter and more efficient. BST presented the latest developments in the areas of web guiding, surface inspection, web monitoring and 100% inspection. The trade fair appearance was complemented by a presentation at the ICE Conference, in which BST showed how technical networking is revolutionizing the industry and giving companies a competitive edge.

With SMARTData, BST presents its 2nd generation workflow, which further increases the quality of web processing, simplifies work processes and automates them across all processes. SMARTData inte-



*BST COATINGControl® ensures perfect alignment of the coating positions using line scan or CIS camera technology with minimum space requirements. Maximum control accuracy is achieved thanks to robust edge detection (Picture: BST GmbH)*

grates seamlessly into existing pre-press and MIS systems and enables centralized control and analysis of

production processes. The data is stored in a modern database with a RESTful API and can be synchro-



nized across multiple processes as a digital twin. This results in more accurate process data, forming the foundation for troubleshooting and error prevention in subsequent processes. Customers benefit from considerable time savings thanks to centralized data entry and a reduction in rejects and complaints.

With the Commander SMART COM 100, BST presents a new, intuitive operating concept for web guiding control, enabling seamless operation of both sensor and control unit from a single interface for the first time. Together with the new ekr CON 610 control unit, the new CLS CAM 200 line and contrast sensor offers more precise control and is considerably more compact than its predecessor model. The exact positioning of the processed material effectively minimizes waste and downtime, ultimately increasing productivity.

100% print image inspection combined with high-quality web inspection: the iPQ-Check inspection system helps customers sustainably enhance print quality. With the new iPQ-Check Digital, BST offers a solution that is specially designed for fully digital printing systems and enables fully automatic inspection from the first print format. Thanks to SMARTData, the system is fully integrated into the customer's workflow, enabling operator-free job setup and automatic job changeover. AI-supported defect detection enables more precise classification of defects and the creation of customer-specific defect categories. This helps the customer concentrate on relevant defects and make informed decision – fully customized to their process.

Maximum precision is essential in the production of lithium-ion batteries. This is where the

intelligent, networked systems COATINGControl® and SLITTINGControl® come in: The systems ensure exact positioning of the coating geometry and minimize even the smallest quality-relevant errors. The web-based user interface and automated calibration routine also make operation easier and increase efficiency.

The iPQ-Surface inspection system ensures the highest quality in material production and further processing. It combines state-of-the-art camera technology with innovative lighting to make even the smallest defects visible. The system is customizable and offers a modular concept for lighting and camera options. The system for inspecting transparent and opaque films was presented at ICE Europe 2025.

BST GmbH

[www.bst.elexis.group](http://www.bst.elexis.group)

## New Single-Screw Extruders Boost Productivity in Polyolefin Recycling

Bausano was among the key players at the second edition of GREENPLAST. The event, scheduled from May 27 to 30 at Rho Fiera Milano, was a perfect occasion to unveil the brand-new E-GO R single-screw extruders, specifically designed to improve the efficiency of polyolefin recycling processes. Now available in sizes 44, 47, and 50 L/D, for a total of 8 brand-new models, they expand the product range with even more high-performance solutions.

The E-GO R series combines the most advanced extrusion and repelletizing technologies for the recycling of polyolefins, such as HDPE, LDPE, and PP, derived from industrial and post-consumer waste. With the goal of supporting partners in the transition to a circular economy, Bausano expands its offering with extruders capable of handling higher outputs. Specifically, the new generation of E-GO R, ranging from 45/37 to 210/37 L/D, can process up to 1,500 to 1,800 kg/h of non-free-flowing material and 1,700 to 2,000 kg/h of free-flowing material.

E-GO R extruders are ideal for recycling lightweight materials with a moisture content of 5 to 6%. Thanks to a high-performance double degassing system, residual moisture and volatile substances are removed during the process, thus preventing the formation of defects in the pellets, such as "air bubbles", caused by gases present in the input blend or generated during the extrusion stages.

E-GO R therefore stands out for the high quality of the extruded product, the result of Bausano's consolidated



expertise in screw design. The geometry of each screw is custom designed to prevent the material fed into the extruder from being subjected to excessive mechanical stress, which could cause degradation of the molten compound.

An additional plus of the solution is the dosing system, designed based on the specific characteristics of the material. Specifically, Bausano offers a system consisting of two hoppers: the first with a flat bottom and volumetric feeding, and the second with forced feeding, which compacts the material before extrusion.

Bausano

[www.bausano.com](http://www.bausano.com)

## Plastics Recycling Show Europe – World's Largest Plastics Recycling Event

The Plastics Recycling Show Europe shattered records in Amsterdam with over 500 exhibitors, more than 75 expert speakers, and an all-time high of 13,325 attendees over the two days.

"The positive vibe in the magnificent flagship Halls 1 & 5 of the RAI was absolutely tangible this year," says Matt Barber, Global Events Director at Crain Communications. "Even though we knew going into PRS Europe that it has been a difficult time for some players in the plastics recycling sector, the excitement and optimism at the show have been palpable. The halls were buzzing with the exchange of ideas and business being done, and there was a confidence that the wealth of innovations on show will catalyse further growth in the circular use of plastic."

"Anyone interested in plastics recycling, whether from politics, science, academia, or active play-

ers like brand owners, converters, producers or recyclers, should come to this show, which is now firmly established as the largest in the world," says Ton Emans, Plastics Recyclers Europe President. "We have brought together leading experts in the two conference theatres and exhibitors with world-class innovations to improve the plastics recycling value chain." Conference speaker Timo Unger, Senior Manager Sustainability & Environmental Affairs, Hyundai said at the show: "I'm totally impressed. I didn't expect so many experts, so many interested people, such a huge amount of new technology. It's a great event and I really appreciate it."

"PRSE is really important because sentiment is maybe a bit negative at the moment in the industry, but when you are walking here among the exhibits, you see a lot of innovation, a lot of good companies and a really positive vibe," added Gerben Hieminga, Senior Economist, ING. "It brings in people like myself, the techno optimists. We can solve these problems, but we really have to start making the business cases and scale up the solutions."

The Plastics Recycling Show Europe brings together key players from the plastics and recycling sectors to showcase innovative technology, share best practices, network and do business. Every part of the circular plastics value chain is represented at the event, including plastics recycling machinery and equipment suppliers, AI-powered sorting technology, plastic material suppliers and compounders, pre-



processors, mechanical and chemical plastics recyclers, waste management specialists and industry associations.

Plastics Recycling Show Europe returns to Halls 1 and 5 at RAI Amsterdam from 5-6 May 2026. Plastics Recycling Shows are now being held in four global locations: Amsterdam, Dubai, Singapore and Mumbai.



## Plastics Recycling Awards Europe 2025 Winners Announced at PRS Europe

The winners of the eighth annual Plastics Recycling Awards Europe were announced at the Plastics Recycling Show Europe in Amsterdam. The 2025 winners exemplify the best advances in the use of recycled plastics in products, as well as the latest innovations in technology

and machinery that facilitate plastics recycling.

"Many of this year's shortlisted entries showcase innovations in plastics recycling that, just eight years ago, would have been considered unattainable," said Ton Emans, Plastics Recyclers Europe's

President. "This demonstrates just how far the industry has progressed since the inception of these awards and underscores the critical value that plastic recycling plays for the future of European industry."

Speaking at the awards ceremony, Karen Laird, Editor in Chief of



Sustainable Plastics and jury chair of the Awards said, "We congratulate all finalists. We've seen the quality of the submissions rise significantly, which has not made the job of selecting a winner for each of the seven categories any easier."

The Plastics Recycling Awards Europe are organised jointly by Plastics Recyclers Europe and Crain Communications, organisers of the Plastics Recycling Show Europe.

Plastics Recycling Awards 2025 Winners

- Automotive, Electrical & Electronic Product: Colored PP Recycled Material Interior Trim Parts for Ford Transit and Ford Truck Vehicles, Ford Otomotiv Sanayi A.S.
- Building & Construction Product: Pretty Plastic 'Second High' panel by Pretty Plastic B.V.
- Household & Leisure Product: aquaplus re., by C. Josef Lamy GmbH x HolyPoly GmbH
- Plastic Packaging Product: kp 100% Tray2Tray® by Klöckner Pentaplast (Linpac Packaging)
- Product Technology Innovation: CleanStream® by Berry Global
- Recycling Machinery Innovation: GAINnext by TOMRA Recycling
- Plastics Recycling Ambassador: Olivier Vilcot, Former General Manager, SRP

[www.prseventeurope.com](http://www.prseventeurope.com)



## Local Presence Paying Off

The UK branch of Dinnissen reflects on a successful start marked by rapid progress, strong client engagement, and key project wins. The establishment of a local presence in September 2024 was a strategic move aimed at strengthening relationships and providing dedicated support to clients across the UK and Ireland. Today, the results speak for themselves.

At launch, Dinnissen UK's goal was clear: to offer local, expert support to a growing client base and reinforce Dinnissen's commitment to the region. "When we opened the UK office, we knew the potential was there, but seeing how quickly it's developed has been remarkable," reflects Dan Baxter, Director of UK Operations. "Time has flown by, and the engagement from clients has exceeded even our optimistic expectations."

One of the standout achievements in this period has been securing in-person visits from UK and Irish clients to Dinnissen's headquarters in the Netherlands – an initiative first envisioned when the branch was opened. "These visits have proven invaluable," says Baxter. "They allow clients to see firsthand how we approach engineering and manufacturing, reaffirming their confidence in our solutions."

While regulatory hurdles were anticipated, Dinnissen UK successfully navigated complex compliance processes without losing focus on client service. Baxter acknowledges, "Setting up operations always comes with its share of red tape, but our clients value that we're investing in being present locally. Their trust reinforces that we made the right move."

Feedback from the market has been overwhelmingly positive. Existing and new clients alike recognize the



Dan Baxter

benefit of having Dinnissen experts readily available in the region. Several notable projects – including a full turnkey pet food facility and the delivery of 50 bulk bag discharging systems – illustrate the scale and variety of opportunities the UK team has already capitalized on.

What began as a strategic expansion has now evolved into a thriving operation, with clear momentum for the future. "Six months ago, we set out to bring Dinnissen's trusted solutions closer to our UK and Irish clients," says Baxter. "We're proud to say that not only have we delivered on that promise, but we're already exceeding expectations. Moving forward, our mission remains to be the leading provider of reliable, efficient process solutions – trusted by the best, now and in the future."

Dinnissen UK Ltd.  
[www.dinnissen.com](http://www.dinnissen.com)

## Recycling Solutions for Plastics

At the PRSE trade fair in Amsterdam on April 1 - 2, Zeppelin Systems presented innovative solutions for plastics recycling and also showcased a laboratory system for deodorization, among other things. This enables a smooth transition to the large-scale plant for processing waste plastics.

Zeppelin offers a wide range of services for systems in plastic recycling from a single source, from basic engineering to automation to final assembly and comprehensive after-sales service, taking into account customized customer wishes and needs.

Deodorizers play an important role in the recycling process. In these, recycled plastics are degassed by a thermal-physical cleaning process and freed of unpleasant odors and other organic contaminants. Zeppelin Systems solutions are particularly impressive in this regard thanks to their energy-saving solutions that integrate energy recuperation of process waste heat.

Zeppelin Systems offers the DEO-L mobile laboratory deodorization system so that users are on the safe side during the deodorization process step. The process steps such as heating, degassing and cooling can be simulated on a laboratory scale. First, the bulk material is heated in the system with a high volume-flow of air (automatically until the target temperature is reached). The deodorization then starts with a reduced air volume, depending on the preset retention time. A large volume of air is again used for cooling. The temperature of the blown-in air can be adjusted

as required up to 120°C using the touch terminal, as can the volumetric flow rate and the retention time. Similar to the production facilities, the laboratory facility also places great emphasis on ease of cleaning; internal containers and outer sheets are therefore made of high-quality stainless steel. The process parameters obtained in the system can be transferred to industrial systems. The degassing results obtained on a laboratory scale thus provide a reliable basis for predicting the deodorization performance in large-scale plants.

Another important task is the reliable separation of lightweight plastic fractions such as films, thin flakes or layers from heavy fractions such as hard plastic or other foreign materials. The GSF counterflow screen is designed in such a way that the good product flow is discharged together with the conveying and visible air via the aspiration nozzle. The screener can be integrated directly into pneumatic conveyor systems. It is suitable for both open and closed-circuit systems. The coarse material is discharged gravimetrically at the bottom product outlet or optionally via a downstream rotary valve. The GSF enables constant separation efficiency over the entire operating period. Since the screen does not have any moving parts, it is also maintenance-free. The continuously operating GSF counterflow screen allows a throughput of up to 25 m<sup>3</sup>/h of bulk material.

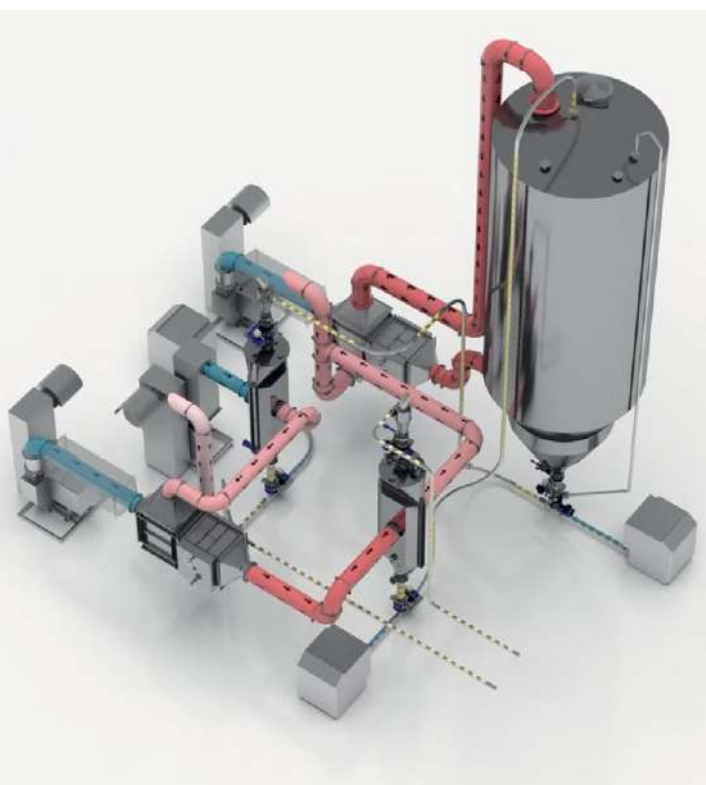
Another important aspect in producing high-quality plastic recyclates is homogenization, that is, the uniform blending of plastic bulk materials. Once again, Zeppelin Systems ensures seamless integration into the overall process here thanks to its customized solutions. As a result, users can rely on production operating under stable conditions. Users also value the gentle static homogenization in Zeppelin Systems plants. In addition, the systems operate quietly and cleanly and require no maintenance or additional energy for blending.

According to the EU directive, around 65 percent by weight of all packaging waste in Europe must be recycled by the end of 2025. And by 2030 at the latest, this level will go up to at least 70% by weight. This is often particularly challenging for fluffy materials such as films, nonwovens or fibers. Zeppelin Systems has been working on innovative recycling solutions for years and also provides excellent solutions for these seemingly challenging products.

After all, while there are already good recycling solutions for hard coarse materials made from polyurethane, polypropylene, acrylonitrile butadiene styrene (ABS) and polystyrene, solutions for fluffy materials are still in the early stages. This is where systems are needed that can reliably process large material flows and react flexibly to changes in the input streams. With Fluff-Tec, Zeppelin Systems is delivering on exactly these requirements.

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*Degassing plastic recyclates effectively with the intelligent Fresh-TEC® process (© Zeppelin Systems GmbH)*





## Technologies for Closing the Loop in Plastics Compounding and Recycling

At Chinaplas Coperion presented key technologies for the entire process chain of processing plastics and recycling. Coperion showcased two extruders that are ideally suited to current challenges in plastics compounding and recycling. The 4th generation STS 75 Mc PLUS twin screw extruder features an increased specific torque of  $13.6 \text{ Nm/cm}^3$ , enabling it to achieve up to 20% more throughput with significantly higher product quality. A ZSK 58 Mc18 twin screw extruder with maximum torque for highest throughput demands, especially designed for products with high torque requirement such as engineering plastics, will also be on display. In addition, Coperion highlighted its reliable and highly accurate feeding solutions, including the Coperion K-Tron T35 gravimetric feeder paired with a 2415 vacuum receiver for ingredient refill, as well as a C/S-LW-NS 60 single screw feeder from Colormax Systems. A ProRate PLUS-M feeder, part of the new line of robust gravimetric single and twin screw feeders, was on display as well. For efficient conveying processes, a CVH 550 high pressure rotary valve and the two-way diverter valve WEK 265 for granulates were shown.

For the recycling of plastics Coperion and Herbold Meckesheim collaborate to provide operators with extensive expertise in technology and process solutions. At Chinaplas, they showcased a virtual 3D recycling installation. Visitors

to the booth had the opportunity to explore key components of the recycling set up, allowing them to observe the technical details of each process step and the high efficiency of each component.

### STS Mc PLUS Extruder: Economic and Efficient Solution for Various Applications

Over the years, the STS extruder series has established itself on the market as a quality product for a wide range of extrusion and compounding tasks such as engineering plastics and masterbatch but also cable masses, the recycling of re-grind plastics, powder coating, and much more. The extruders are produced at Coperion in Nanjing, China, in accordance with CE guidelines and the highest Coperion standards of quality. They are distinguished by their very attractive price-to-performance ratio.

The STS 75 Mc PLUS presented in the Coperion booth 10K25 is the 4th generation of STS technology and is equipped with a specific torque of  $13.6 \text{ Nm/cm}^3$  at screw speeds of up to  $900 \text{ min}^{-1}$ . This advancement allows the compounder to deliver enhanced product quality while increasing throughput by up to 20% across all applications compared to earlier models. Key to this performance boost, alongside process-related modifications, is the optimization of the drive's key components. The STS 75 Mc PLUS

extruder features a high-power motor and a gearbox specifically designed to handle high torque. Proven high-performance materials are used for the screw shafts to ensure effective torque transmission from the gearbox to the screw elements. The higher fill level in the process section is crucial to the improved compound quality achieved by the STS 75 Mc PLUS, as it reduces both shear stress and melt temperature while enhancing mixing behavior. This results in an exceptionally gentle product handling at high throughputs.

### ZSK Mc18 Extruders: Made for Highest Demands

Visitors to the booth could also learn more about the advantages of the renowned ZSK extruder series. These high-performance extruders such as the ZSK 58 Mc<sup>18</sup> on display achieve the highest throughput rates and maximum economic efficiency. The extruder with a specific torque of  $18 \text{ Nm/cm}^3$  is characterized by its consistently high throughput capacity with first-class product quality. With the assembly in China, Coperion is able to react as fast as possible to customer demand. Customers benefit from local added value, transport and tax savings as well as from shorter delivery times.

### Complete Plastics Recycling Plants from a Single Source

Coperion and Herbold Meckesheim realize plants for a wide variety of plastics recycling applications, excelling in their reliability and the high product quality they achieve. From mechanical processing – shredding, washing, separating, drying and agglomerating of plastics – to bulk material handling as well as feeding and extrusion all the way to compounding and pelletizing, such plants cover the entire plastics recycling process chain. Together, Coperion and Herbold Meckesheim offer solutions for different recycling

*The Coperion STS 75 Mc PLUS twin screw extruder achieves up to 20% greater throughput with improved product quality, at an increased specific torque of  $13.6 \text{ Nm/cm}^3$*   
(Photo: Coperion, Stuttgart Germany)





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

processes such as mechanical recycling of post-industrial and post-consumer waste, chemical recycling, PET recycling or solvent-based recycling.

Especially for recycling of post-consumer recyclate (PCR) or any highly contaminated polymer, Coperion offers the innovative ZSK FilCo filtration compounder that allows filtration and compounding in a single production step. Compared to the two-step production lines that have been the norm until now, Coperion's ZSK FilCo is distinguished by a markedly more streamlined equipment set-up. Energy consumption and emissions for the extrusion process are reduced by more than 50%.

### Robust, Flexible and Precise Feeding Solution: ProRate PLUS

The ProRate PLUS feeder line integrates state-of-the-art European weighing technology and controls, ensuring high accuracy and reliability in loss-in-weight feeding processes. This line meets the growing demand for robust and efficient feeding solutions in the plastics industry. The ProRate PLUS continuous gravimetric feeder line is an economical solution and offers a quick return on investment due to its good price-performance ratio and fast delivery times.

The ProRate PLUS feeder line features a space-saving trapezoidal shape which allows up to six feeders to be easily grouped around an extruder inlet within a 1.5 meter [5 ft] radius. Three single screw feeder models PLUS-S, PLUS-M and PLUS-L along with the PLUS-MT twin screw model cover a wide range of throughputs and bulk materials. ProRate PLUS feeders are capable of handling feed rates from 3.3 up to 4800 dm<sup>3</sup>/h [0.12 up to 400 ft<sup>3</sup>/h], depending on the material. Theoretically, a feeding system with six ProRate PLUS-L feeders can feed up to 28.8 m<sup>3</sup>/h [1017 ft<sup>3</sup>/h] on a footprint of only 7 m<sup>2</sup> [75 ft<sup>2</sup>].

*The ProRate PLUS feeder line features a space-saving trapezoidal shape which allows up to six feeders to be easily grouped around an extruder inlet within a 1.5 meter [5 ft] radius (Photo: Coperion K-Tron, Switzerland)*

### Smart Feeding Solutions

In addition, Coperion demonstrated its expertise in all feeding tasks at this year's Chinaplas with its high-accuracy Coperion K-Tron K2-ML-D5-T35 gravimetric feeder equipped with ActiFlow™ smart bulk solid activator and EPC (Electronic Pressure Compensation). The feeder is equipped with a 2415 vacuum receiver for refill.

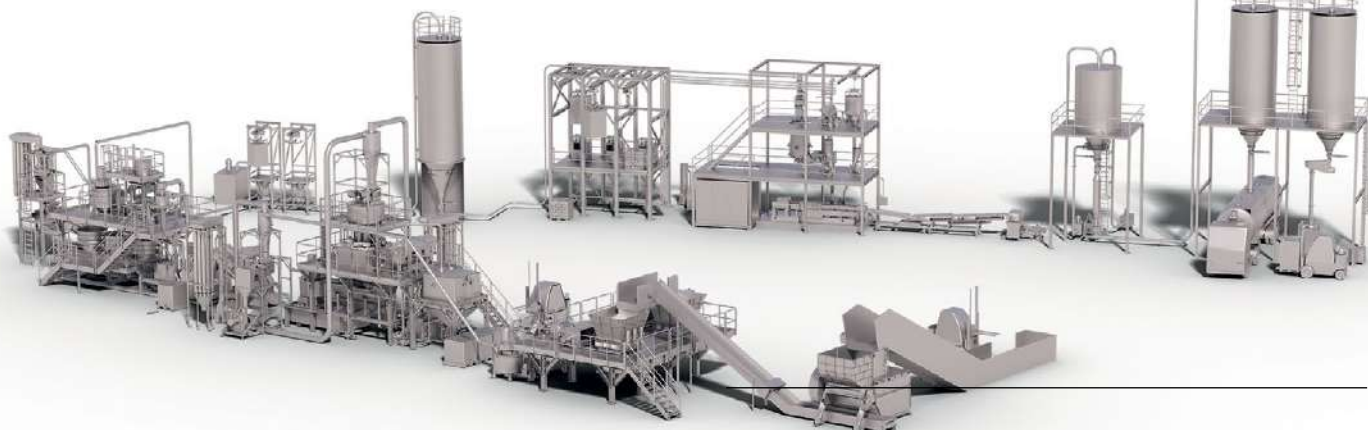
The ActiFlow™ smart bulk solid activator offers an innovative method to reliably prevent bridging and rat-holing of cohesive bulk materials in stainless steel hoppers without internal hopper agitation. The smart flow aid applies gentle vibrations to the hopper wall, hereby carefully activating the contained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

### All-around worry-free service

Coperion conducts its intensive research & development work both for new plants and for their integration into existing systems. For this purpose, Coperion offers comprehensive maintenance and modernization packages for all its technologies, which increase the productivity, flexibility and reliability of the plants to a significantly improved level. Such services allow plant operators to fully exploit the improved performance potential of the plant after shortest time.

Coperion

[www.coperion.com](http://www.coperion.com)



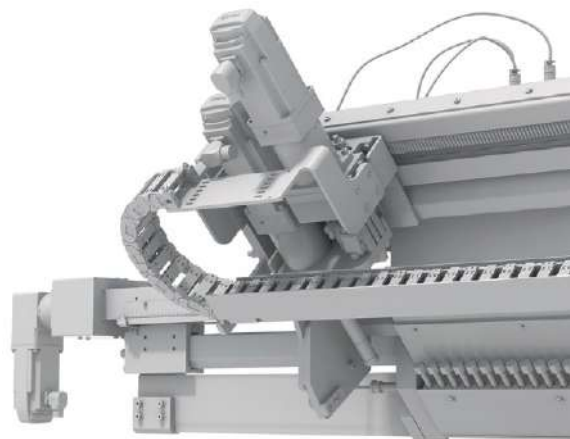


## MDO Technology Enables Recyclable Packaging at Competitive Costs

At Chinaplas 2025, the Reifenhäuser Group presented its latest technological innovations for the efficient and sustainable production of plastic films. The extrusion specialists showcased at Shenzhen World Exhibition & Convention Center solutions that address the key challenges of today's plastic industry: reducing resource consumption, increasing recyclability, and making production more autonomous and efficient. Meeting these demands requires advanced production technologies that Reifenhäuser already offers today.

A central focus at the show was the use of Machine Direction Orientation (MDO) technologies for producing fully recyclable mono-material films with performance and cost-effectiveness equivalent to conventional multi-material structures.

With the EVO Ultra Stretch MDO unit for Reifenhäuser's blown film lines manufacturers produce all-PE mono films for applications such as high-barrier food pouches. Due to the stretch process film thicknesses of 18µm (with properties of a 25µm product) and less can be achieved, keeping production costs within the range of conventional films. With the patented integration of the MDO unit directly into the haul-off, the film is stretched in the ideal phase of the process – using the first



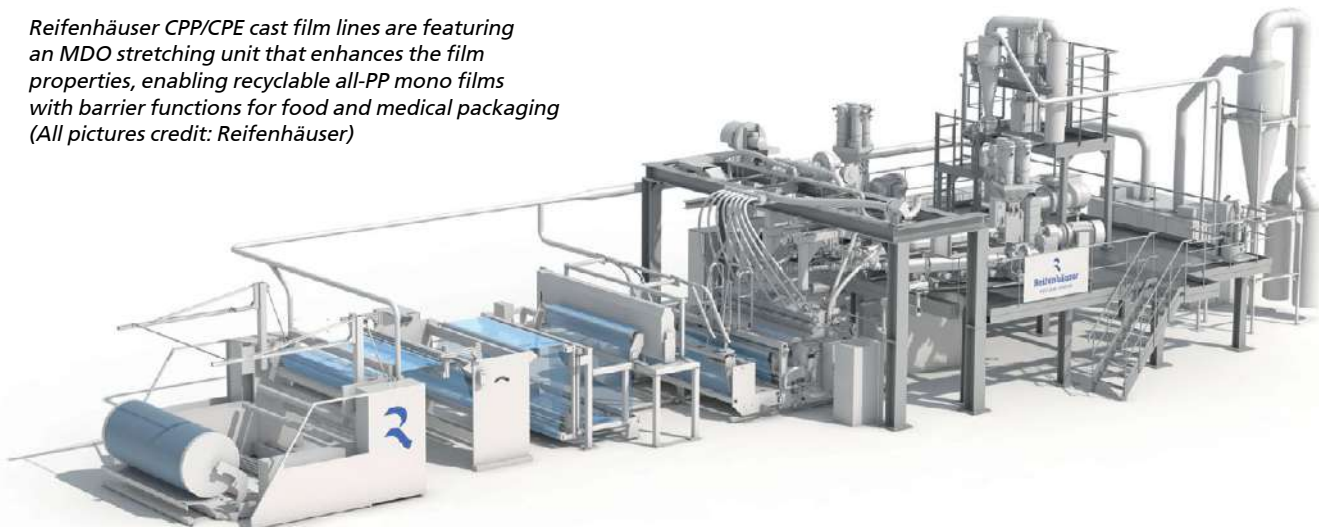
*The Reifenhäuser PAM automation option simplifies the operation of coextrusion adapters and dies. The high degree of automation makes producers independent of the shortage of skilled workers*

heat – for maximum efficiency and film stability. Furthermore, the all-PE film achieves the required barrier effect with an EVOH content of less than five percent, fully meeting the criteria for recyclability. At the same time, Ultra Stretch enhances the performance of the EVOH barrier layer while reducing material usage, delivering cost and sustainability benefits.

The same applies to MDO technology in the flat film sector. With its CPP/CPE cast film line Reifenhäuser provides best transparency, printability, easy-tear properties, and sealing. The line features an MDO stretching unit that enhances the film properties, enabling recy-

clable all-PP mono films with barrier functions for food and medical packaging. Here too, stretching the EVOH layer improves the barrier effect while preserving recyclability. In addition, customers can opt for the unique Reifenhäuser automation system PAM (precise, autonomous, mechatronic) bringing cast lines to a whole new level. PAM automatically adjusts coextrusion adapters and dies via high-precision actuators for optimum convenience, quality and productivity. Once recipes have been set, they can be saved and called up immediately at the touch of a button – even by inexperienced system operators. The high degree of automation makes producers

*Reifenhäuser CPP/CPE cast film lines are featuring an MDO stretching unit that enhances the film properties, enabling recyclable all-PP mono films with barrier functions for food and medical packaging (All pictures credit: Reifenhäuser)*





*KARAT cooling rings from Kdesign are known for their high performance, minimal film tolerances and easy handling*

Kdesign, Reifenhäuser's subsidiary and leading specialist in cooling, measuring, and calibration systems for blown film lines, also showcased at the Reifenhäuser Chinaplas booth.

With the famous KARAT cooling ring, Kdesign regularly sets benchmarks for maximum cooling performance, ultra-low film tolerances, and user-friendly operation. Processors all around the world rely on Kdesign solutions to improve blown film production in terms of quality and productivity. With an output capacity that is up to 50 percent higher than mid-range products and 25 percent higher than high-end competitors, the KARAT cooling ring enables a significant

increase in productivity, while at the same time maintaining excellent profile tolerances and top film quality.

In addition, Kdesign offers sophisticated secondary cooling units: With the CENTRO-Freeze, producers avoid film blocking in the haul-off by additionally cooling the bubble before it enters the flattening process. By using the CENTRO-Freeze, the output is therefore further increased, while producers save on anti-block additives and improve the film properties. All Kdesign components reflect over 20 years of experience in retrofitting existing blown film lines and equipping new OEM lines.

Reifenhäuser Group

[www.reifenhäuser.com](http://www.reifenhäuser.com)

independent of the shortage of skilled workers. Energy consumption is 99% lower compared to a thermal expansion bolt system, as the actuators only need to be supplied with power during the adjustment process and not permanently.

## European Market Position Strengthened

B.I.G. Yarns, a leading designer and manufacturer of polyamide (PA), polypropylene (PP), and polyester (PET) carpet yarns for commercial, automotive, residential, and technical applications, announces a significant investment of €25 million in its French yarn production site. This investment reinforces its commitment to innovation, sustainability, and European manufacturing. It includes the installation of cutting-edge BCF lines, enhancing B.I.G. Yarns' leadership in one-step 3-ply yarns and further solidifying its position as a key player in the global market.

B.I.G. Yarns focuses on the development and production of 1-step 3-ply yarns using the latest technology to meet the need for flexibility and broader design possibilities in the carpet tile segment. The newly developed machine park represents a crucial step in B.I.G. Yarns' growth strategy, ensuring a more energy-efficient, faster, and more flexible production system. By enabling smaller batch sizes and more adaptable production runs, B.I.G. Yarns will provide its contract customers with a highly competitive and sustainable product offering.



By continuing to also invest in Europe, B.I.G. Yarns is making a strong statement about its dedication to local entrenchment in a highly competitive industry. While market pressure continues to grow from manufacturers in the Middle East and Asia, B.I.G. Yarns leverages its strategic location in Europe – within 500 km of its most important customers – to ensure faster delivery, closer collaboration, and an unparalleled service level.

This bold step not only strengthens B.I.G. Yarns' market leadership in 1-step 3-ply yarns but also highlights its vision for a more sustainable and innovative future in yarn production.

Beaulieu International Group (B.I.G.)

[www.solids-recycling-technik.de](http://www.solids-recycling-technik.de)

*B.I.G. Yarns strengthens European market position with major investment in state-of-the-art Yarn production (Photos: © Beaulieu International Group)*



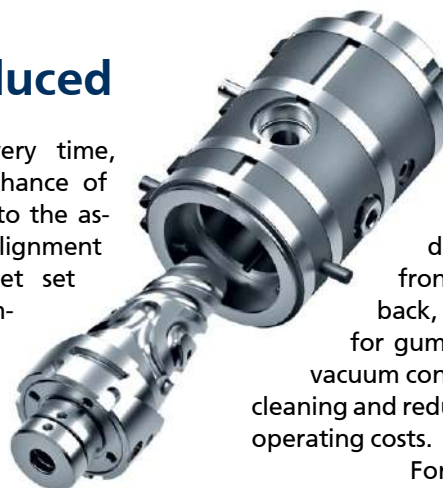


## New Cam-Lock Design Introduced

Guill Tool, the global leader in extrusion tooling, recently announced the availability of its Cam-Lock design on various crossheads.

The Cam-Lock is the same as supplied on the Bullet and will be supplied on additional heads, where applicable. It allows quick and easy assembly and disassembly of the crosshead and eliminates the socket head caps screws. By removing and replacing the internals, a different profile can be extruded in minutes rather than hours. Since the cam lock resets the internals in the right

configuration every time, there's far less chance of error, compared to the assembly and misalignment issues with socket set screws. The Cam-Lock offers several features such as: it takes only ½ turn to remove and install the deflector tip and no fastening hardware is required. Additional features include fast tool changes (threaded retain-



ing ring for the die and threaded tip retainer), dies remove from the front and tips from the back, tooling retainers for gum space adjustment, vacuum connections, simplified cleaning and reduced downtime and operating costs.

For more information:

Tom Baldock, Sales Manager, Extrusion  
Guill Tool & Engineering  
tbaldock@guill.com, www.guill.com

## Halogen-Free Flame Retardant

As an alternative to chlorine- or bromine-based flame retardants, Tosaf's portfolio now also includes highly active, halogen-free (HFFR) grades, which enable more sustainable solutions to fulfil customer requirements and legal specifications. FR8719PP is specifically designed to meet the flame-retardant requirements of polypropylene in injection moulding and extrusion applications.

Without compromising on efficiency and even at very low concentrations, FR8719PP helps to prevent the spread of fire and meet stringent fire safety criteria in applications such as construction, automotive and shipping packaging without compromising the properties of the material. PP pipes, for example, retain their high impact strength, dimensional stability and chemical resistance without restriction after switching to halogen-free flame retardants. In contrast to many halogen-based flame retardants, FR8719 shows no long-term migration of the active ingredients, and corresponding PP products offer significantly higher UV resistance.

The good dispersion of FR8719PP in injection-moulded and extruded PP-based products is one reason for the very high efficiency of this HF flame retardant. This not only enables a relatively low dosage and therefore the mechanical properties to be largely retained, but also uniform flame retardancy across the

entire product. In addition, the low potential for dye build-up (DBU) offers a considerable processing advantage over other halogen-free solutions available on the market.

The choice of flame retardant depends largely on which UL94 classification is to be achieved. For example, to fulfil the requirements of class V-2, flame retardants in low concentrations are sufficient to eliminate the free radicals formed by the heat of combustion and thus suppress the fire. Only in higher concentrations do they also prevent burning droplets, as required by the UL94 V-0 classification.

Tosaf has developed an extensive portfolio of HFFR grades that differ from each other in their flame-retardant systems and fulfil individual priorities to achieve the optimum balance between effect and concentration. Their dosage is between 3 % and 10 % and depends on the desired classification, the type and melt flow index (MFI) of the PP, the thickness of the part and the simultaneous presence of other additives. In contrast, intumescent halogen-free flame retardants require a dose of over 20 % to achieve similar performance.

In addition to developing new HFFR grades that do not harm health or the environment, Tosaf also fulfils the continuing need for halogen-based products. They combine high thermal stability with high performance



*Extruded pipes made of halogen-free flame-retardant polypropylene, which are used, for example, for guiding electrical cables, protecting optical fibres or for supplying and discharging media, prevent the spread of fires (© shutterstock/Flegere)*

to fulfil stringent fire standards without compromising the properties of the product. For example, the brominated flame retardant FR6413PE is suitable for all types of PP pipes, while chlorinated cost-effective flame retardants such as FR0049 can be used for both PE and PP.

To meet the growing demand for flame retardants, Tosaf has invested in a state-of-the-art production facility. A high-tech laboratory equipped with a cone calorimeter for complete combustion analysis, among other things, is available for testing according to a variety of fire standards. In addition, the company has set up pilot lines that simulate real production conditions and make it possible to tailor flame retardant additives for specific applications.

Tosaf Compounds Ltd.  
www.tosaf.com

## New PPS Coating Grade Introduced

Syensqo has introduced a new Ryton® polyphenylene sulfide (PPS) coating grade, custom-engineered to resolve unmet needs in ease of application and achieving strong coat performance at lower builds. This coating grade offers an efficient coating process that allows for better deposition per pass. As a result, it reduces the time and resources required for coating, while maintaining high throughput of coated articles.

"With this innovative Ryton® solution, we are responding to an industry trend that focuses on more easily applied high-performance coatings with a smaller health, safety and environmental (HSE) footprint," explained Hong Chen, Principal Research Scientist at Syensqo. "Building on our proven PPS chemistry, it delivers high barrier properties, provides excellent resis-

tance to corrosive chemicals, demonstrates good adhesion to metals, and can operate at temperatures up to 200°C."

Ryton® PPS M2000 FP supports clients who seek a sustainable, low-volatile powder coating solution that combines high molecular weight with safe application, optimized coating build and minimal post-curing after film formation.

Boris Makhinson, Syensqo Americas Market Manager for Energy concluded: "The new Ryton® grade extends our PPS chemistry to powder coatings for use in demanding environments, such as the oil and gas industry. It makes the coating job easier and safer for applicators and is commercially available worldwide."

*Ryton® is a registered trademark of Syensqo.*



*Syensqo has introduced two innovative coating products that extend the company's proven Ryton® PPS chemistry to powder coating applications with smaller HSE footprint in demanding industrial and energy markets (Photo: Syensqo)*

Syensqo

www.syensqo.com

## Sustainability in the Plastics Industry

In times of increasing global environmental responsibility, plasma technology is becoming more and more the focus of the plastics industry. Plasmatreat is setting new standards in plastics processing with its innovative developments Openair-Plasma and PlasmaPlus.

Openair-Plasma (atmospheric pressure plasma) developed by Plasmatreat can be used to change the surface properties of plastics. The activation that occurs when the plasma jet strikes the surface optimizes wettability and significantly increases adhesion. This results in long-term stable adhesion of adhesives, paints, varnishes, liquid or solid sealants. PlasmaPlus, another process developed by Plasmatreat, also makes it possible to coat plastics with a nanocoating that improves adhesive adhesion while eliminating the need for environmentally harmful chemicals such as primers.

With its beneficial properties, plasma technology plays a key role in implementing the three basic princi-

ples of sustainability - reduce, reuse, recycle - in the plastics industry:

- **Reduce:** By using plasma technology, plastics production can be made more resource efficient, as plasma treatment increases the compatibility of plastics. Energy-intensive, expensive materials can be replaced by cheaper and more resource-efficient alternatives, such as recycled plastics.

- **Reuse:** The life of plastic products is significantly extended through the use of plasma. Products can be used and reused for longer periods of time due to the improved adhesion and resistance achieved through plasma surface modification.

- **Recycling:** A key benefit is the improved processability of recycled plastics. Plasma pretreatment makes these plastics more usable, allowing them to be recycled and reducing waste.

Plasma technology also ensures more environmentally friendly production processes. Openair-Plasma treatment requires only compressed air and electricity to operate, is sol-



*Openair-Plasma treatment of a recycled plastic cup. Plasma pretreatment makes recycled plastics more usable, allowing them to be recycled and reducing waste (Copyright: Plasmatreat GmbH)*

vent-free and reduces the need for environmentally harmful chemicals. This not only conserves resources, but also reduces CO<sub>2</sub> emissions and improves the environmental performance of many industrial processes.

Plasmatreat GmbH

www.plasmatreat.com



## Service and Availability for the Indian Market

The globally active MAAG Group, headquartered in Oberglatt, Switzerland, will continue to position itself as a strong regional player in the Indian market: The Vadodara subsidiary specializes in localized machine and service offering.

With a growing number of customers in the polymer, chemical and petrochemical industries, India has developed into an important market for MAAG. Present through regional partners since 1980, the company has been underlining the strategic importance of the Indian market with its own branch in Vadodara in western India since 2016. It currently employs more than a dozen local specialists.

As a provider of customer-specific systems and integrated solutions for the polymer industry, MAAG India focuses on localized products such as strand pelletizers. Customers in India thus benefit from machines that are precisely tailored to their regional requirements and at the same time meet the highest quality standards from German production.

This localized portfolio is complemented by a comprehensive on-site service: Native-speaking technicians from the MAAG team provide maintenance and consulting services throughout the country to ensure reliable and long-term use of the machines.

MAAG also operates its own grinding center in India for cutting rotors on pelletizing systems. The site is therefore part of the world's largest service network in the polymer industry, which includes a total of eight grinding centers



across the globe. MAAG passes on its manufacturing expertise to local specialists. Equipped with state of the art machinery, MAAG India specialists are able to provide a quick, reliable and professional grinding service for cutting rotors, including those from other manufacturers. The precision of the regrinding on the entire tooth profile ensures long-lasting granulation results and optimized cutting rotor lifetime.

Vadodara, located about 400 km from Mumbai, has become an attractive hub for international companies in recent years and a first choice location for MAAG India. The city has a population of around 2.1 million and is centrally located in the state of Gujarat. A location which enables MAAG to be close to its customers as many companies from the polymer and compounding industry are also established nearby.

**MAAG Group**

➔ <https://maag.com/about-us/locations/vadodara/>

## Market Study: Engineering Plastics

Car parts made from sugar or vegetable oil? Engineering plastics are usually still more expensive than standard plastics. However, they not only offer outstanding mechanical and chemical properties, but increasingly also natural raw materials and organic qualities. Ceresana has analyzed the global market for these amazing high-performance polymers: Over 24 million tonnes of ABS, PC, PA, PMMA, POM, PBT, SAN and fluoropolymers are currently sold each year. Demand for the colorful array of abbreviations will continue to grow: Market researchers forecast that global demand for engineering plastics will increase by around 2.6% per year until 2033. The largest sales markets for this are China, the USA, Germany, and Japan.

### The study in brief

Chapter 1 provides a description and analysis of the global market for engineering plastics – including forecasts up to 2033: For Europe, Asia-Pacific, North America and

the rest of the world, demand and production in tonnes as well as revenues in USD and EUR are detailed. In addition to market development and price trends, global and regional demand per type of plastic, per application area and the demand for individual products per application are analyzed.

The following products are examined in detail: Acrylonitrile butadiene styrene (ABS), Polycarbonate (PC), Polyamide (PA), Polymethyl methacrylate (PMMA), Polyoxymethylene (POM), Polybutylene terephthalate (PBT), Styrene acrylonitrile (SAN), Fluoropolymers.

Application areas analyzed in this study are: Transportation (especially the automotive industry), electrical and electronics, consumer goods, construction, other applications.

In Chapter 2 the national markets for engineering plastics in 25 countries are examined individually. Country-specific demand, revenues, production and trade, demand per product and type of plastic, and de-



mand per application are detailed for various geographical markets, in particular for: Belgium, Germany, France, the United Kingdom, Italy, the Netherlands, Spain, Poland, Russia, Turkey, Canada, Mexico, the USA, Brazil, China, India, Japan, South Korea, Taiwan.

Chapter 3 provides useful company profiles of the largest producers of engineering plastics – clearly arranged according to contact details, revenue, profit, product range, production sites, production capacities, and profile summary. In-depth profiles of 66 manufacturers of engineering plastics are supplied.

➔ <https://ceresana.com/en/produkt/engineering-plastics-market-report>

# CHINAPLAS 2025



CHINAPLAS 2025, held from April 15 to 18 in Shenzhen, P.R. China, attracted global attention from the plastics and rubber industries. Despite facing global economic challenges, the exhibition, spanning 19 halls with over 380,000 square meters of display space, was a major success, hosting over 4,500 exhibitors from around the world. Visitors gathered to explore groundbreaking technologies and solutions in plastics and rubber.

The event saw 281,206 attendees over four days, marking a 13.29% increase from CHINAPLAS 2023. Among them, 68,542 visitors (24.37%) came from overseas, including Hong Kong, Macau, and Taiwan – representing a remarkable 141.1% growth compared to the previous year. The show captivated attendees with innovations in multiple industries, leading to numerous business deals and expanding global networks.

The exhibition featured 9 international pavilions, offering visitors access to diverse business opportunities. With an impressive range of products – from cutting-edge technologies to established solutions – the exhibition catered to various sectors, including automotive, electronics, packaging, and sustainability. Overseas visitors expressed satisfaction with the exhibition's size and the high-quality products and solutions on display.



## Interactive and Digital Engagement

CHINAPLAS LIVE enabled those unable to attend in person to engage with the show through live-streamed content, including interviews, activity highlights, and insights into the latest innovations. A notable new feature, AI: Shining Your Dream, offered visitors an interactive AI experience that added an exciting, futuristic dimension to the event.





### Highlights of Concurrent Events

Several concurrent events enriched the exhibition, drawing attention to critical industry topics:

- **CHINAPLAS X CPRJ Plastics Recycling & Circular Economy Conference:** Over 800 participants heard from more than 60 speakers about the latest in plastics recycling and sustainability efforts across industries such as packaging, automotive, 3C electronics, and textiles.

- **Sustainable Plastic Packaging Forum:** Leading packaging experts discussed global sustainability strategies, sharing insights into challenges and opportunities in material innovation and process efficiency.

- **Tech Talk:** More than 40 new technologies were unveiled, covering a wide range of themes including 3D printing, automotive lightweighting, green low-carbon solutions, and rubber technologies.

- **innoGreen Hub:** Focused on smart and sustainable manufacturing, this area showcased advanced injection molding techniques and cutting-edge materials.

- **SportsTech Chic + Green:** This special event highlighted innovations in sportswear and sporting goods, discussing trends in product design and production methods aligned with sustainability goals.

- **Recycling Demonstrations:** Two fully operational recycling production lines demonstrated practical applications of plastics recycling in a circular economy, with concepts such as PET food-grade recycling and high-quality PE recycling.

- **Product Innovation Gallery:** Over 200 innovative products were displayed, offering visitors a quick look at the technology behind these advancements.

### Additional Educational Opportunities

Several thematic forums provided valuable insights into the future

of the polymer industry. These included discussions on recyclable medical packaging, cost reduction strategies, and improving efficiency in electronics manufacturing. The Market Insights Hub featured three key forums on topics like RCEP strategies, ESG and sustainable supply chains, and new quality product development trends.

In a first for the event, visitors had the opportunity to visit factories, directly engaging with technical executives and learning about innovative product manufacturing and ESG practices.

### Fostering Collaboration and Growth

CHINAPLAS also facilitated networking through initiatives such as Development Day for Campus Elites, which matched top graduates with leading enterprises in the plastics and rubber sectors.

Looking ahead, CHINAPLAS 2026 is set to take place from April 21-24, 2026, at the National Exhibition & Convention Center (NECC) in Hongqiao, Shanghai. The organizers are excited to continue fostering innovation and collaboration in the global plastics and rubber industries.

www.chinaplasonline.com





# New ReadyMac for Post-Consumer Applications now with Laserfilter

*EREMA is expanding the portfolio of its ReadyMac plastics recycling system by introducing the new ReadyMac 500 "Heavy Duty" version. Thanks to the integration of the EREMA Laserfilter, this universal and cost-effective recycling machine is now also suitable for processing demanding post-consumer materials.*

"The updated ReadyMac has hit the mark in terms of market requirements and has exceeded our expectations, especially given the current economic environment," says Michael Köhnhofer, Head of the ReadyMac Business Unit at EREMA. Based on this success, EREMA is expanding the offering of its immediately available standard recycling machine with an attractive price-performance ratio: The new ReadyMac 500 Heavy Duty (HD) version is equipped with an EREMA Laserfilter and designed specifically for challenging materials.

## Proven Laserfilter technology

The new ReadyMac 500 HD with EREMA Laserfilter is ideal for more heavily contaminated input streams. "Efficient filtration systems are essential to achieve the desired melt quality when processing highly contaminated materials. That's why the ReadyMac is now also available with Laserfilter," explains Köhnhofer. The EREMA Laserfilter reliably removes unwanted impurities such as paper, wood, aluminium, or foreign polymers from the plastic melt, while the screen is continuously cleaned by a scraper system. In addition to the new Laserfilter version, the ReadyMac 500 remains available with the proven SW RTF® screen changer system at a fixed price of EUR 375,000. This gives customers the flexibility to choose the best solution for their specific recycling requirements.

## Post-consumer recycling at an attractive price

With the launch of the ReadyMac 500 HD, EREMA is expanding its standardised machine offering for cost-conscious companies operating in post-consumer recycling who do not require a customised system. This

*The ReadyMac 500 Heavy Duty is a standardised recycling machine designed for post-consumer applications, offering excellent value for money and equipped with an EREMA Laserfilter*



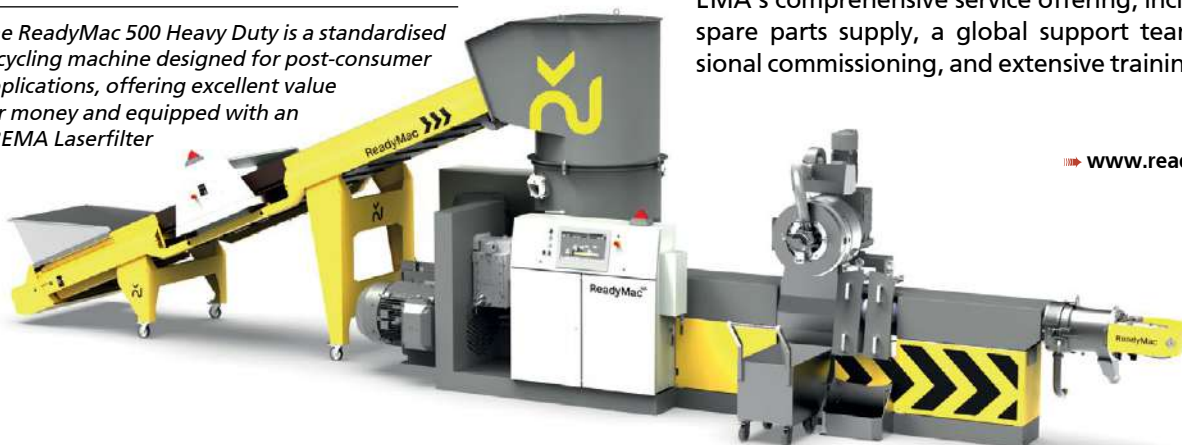
*At Propak in Johannesburg in mid-March, EREMA presented the ReadyMac for the first time to the African market. Michael Köhnhofer, Head of the ReadyMac Business Unit, was delighted with the high level of interest*

enables the ReadyMac to meet the needs of an even broader range of customers. With a throughput of 500 kilograms per hour, it also offers an ideal entry point into plastics recycling with an excellent price-performance ratio.

## Availability and global service

"The ReadyMac 500 is an excellent choice for companies looking for an economical solution without compromising on quality or EREMA's renowned service," Köhnhofer emphasises. The standard machine features EREMA's proven TVE technology, in which degassing occurs after filtration. Customers also benefit from EREMA's comprehensive service offering, including fast spare parts supply, a global support team, professional commissioning, and extensive training options.

ReadyMac  
www.ready-mac.com



# Top Performance in Plastics Recycling

*Cabka GmbH & Co. KG in Weira is part of the Cabka Group, which became a listed company in 2022. As a pioneer in processing mixed plastics, recycling has been part of the company's DNA for more than 25 years. Lindner's Micromat HP supports the innovative company in creating sustainable products and impresses with its performance.*

The Cabka Group is an innovative recycling company specialised in producing pallets and large containers made from recycled plastic. As a plastic recycling pioneer, the company has prioritised sustainability and the circular economy for over 25 years. At its Weira site, mixed plastics from a range of different

fractions are processed on all its lines. These fractions generally include PE, PP, PS and PET as well as additional materials such as caps and labels.

The plastic recycling lines run seven days a week in continuous shifts. After shredding, drying and mechanically cleaning, the new raw materials are transformed into the different end products at the very same site. "The choice of the right shredder plays a crucial role in the recycling process," says Christian Leicht, Technical Manager at the Weira site. "To achieve a high level of productivity, it is especially important to maintain a consistently high throughput together with minimal downtime. The Micromat HP has impressed us in many respects."

"We specifically designed the single-shaft shredder Micromat HP for the heightened demands in plastic recycling. For instance, this sector requires a greater throughput and the plastics being processed have a significantly higher level of contamination," adds Christoph Gaschnig, Product Manager at Lindner Recyclingtech. "This is why we've equipped the new Micromat HP with a powerful direct belt drive and an adjustable torque. The wear parts are designed such that they

*Input material: At the Weira site, all lines need to process mixed plastics of a range of different fractions, including PE, PP, PS, and PET as well as other materials such as caps and labels*



*Lindner's new Micromat 2000 HP was showcased at K 2022 and started work at Cabka Recycling a short time later. The throughput, ease of maintenance and minimal downtime continue to prove impressive. Pictured from left to right: Christian Leicht and Wolfgang Pieter from Cabka Weira (All pictures: Copyright: Lindner Recyclingtech)*

can be easily replaced – the rotor is easy to access to ensure contaminants can be removed quickly without any problem."

Leicht describes their initial reaction: "When Lindner offered us the new Micromat HP for a trial run, we were initially sceptical. However, comparative tests with the existing shredders in our plant surprised us – in a good

*The result: A consistently defined output material without any scraps of film at an output rate of up to 4 t/h. Shredding takes place 24/7 in a three-shift operation*





way. We can achieve an output many times higher than before with the Micromat HP and we are also impressed by the ease of maintenance. The screw-on wear parts such as the knives and knife holders are easy to replace without time-consuming welding or other compromises," says Leicht. Both plastic lines are serviced entirely in-house. The shredder's knives are maintained – rotated or replaced – every seven days due to the three-shift operation. If the knife holder is damaged due to a contaminant, it can also be easily replaced. "Just recently we've added a second Micromat HP, which delivers a throughput equal to that of the two shredders we had previously," Leicht adds.

Lindner-Recyclingtech GmbH  
Manuel-Lindner-Str. 1, 9800 Spittal/Drau, Austria  
www.lindner.com



*After an extensive testing phase, the second plastic line is also equipped with a Micromat HP. The throughput performance and output quality speak for themselves*

# Milestone in Food-Grade PET Recycling

*Next Generation Recyclingmaschinen (NGR) announced a significant achievement: the European Food Safety Authority (EFSA) has issued a positive Scientific Opinion for NGR's Liquid State Polycondensation (LSP)- Process for advanced PET Recycling. This marks a groundbreaking milestone as LSP becomes the first recycling process to complete evaluation under the updated regulation (EU) 2022/1616.*



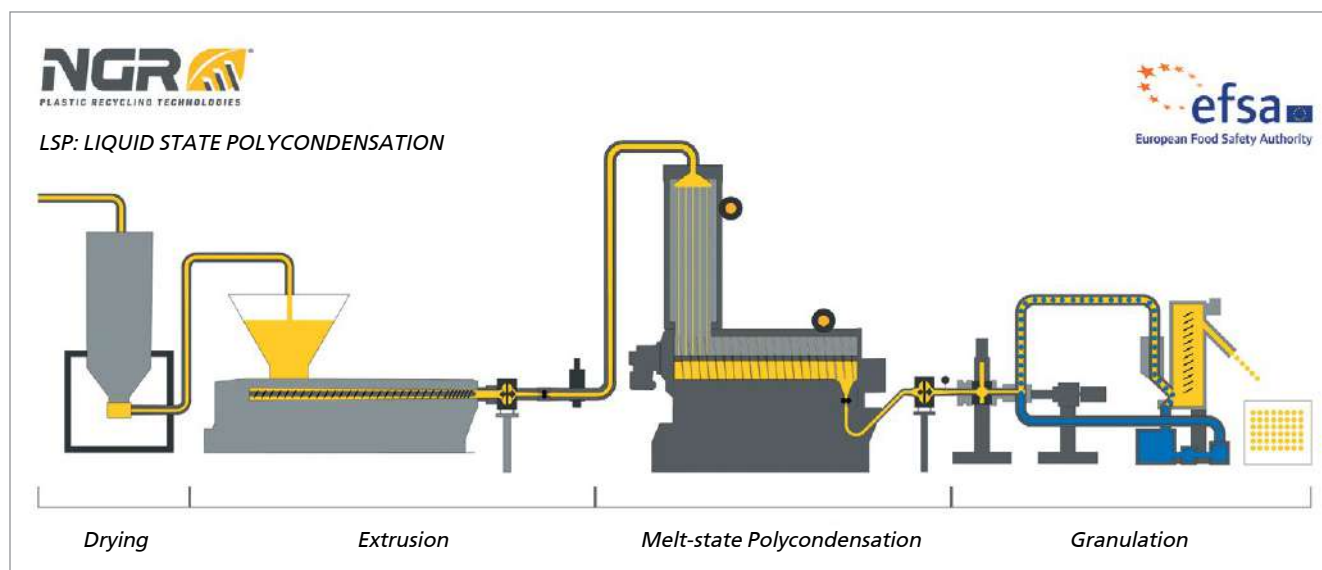
*P:REACT 2000 plus utilizing LSP-Technology (Photo: NGR)*

The introduction of regulation (EU) 2022/1616 in September 2022 revolutionized food-grade recycling approvals across the European Union. Unlike the previous regulation (EC) 282/2008, where individual recyclers sought authorization, the responsibility now lies with developers of decontamination processes. Each approved process is assigned a unique Recycling

Process Authorisation Number (RAN) and listed in a public register.

This change, combined with new EFSA guidance imposing stricter evaluation criteria required all recycling machine manufacturers to resubmit their processes for re-evaluation. While processes approved under the old regulation were not guaranteed compliance under the





new standards, NGR's LSP process has successfully demonstrated its exceptional cleaning efficiency, setting a new benchmark in food-grade plastic recycling.

### Liquid State Polycondensation (LSP) process

Unlike traditional solid state polycondensation (SSP), which requires prolonged high-temperature processing in a vacuum, the Liquid State Polycondensation (LSP) Process harnesses the faster reaction rates in the melt phase. This breakthrough approach significantly reduces energy consumption and processing time while delivering high-quality results.

The combination of high molecular agility in the liquid phase and the large surface area of the material strands ensures highly effective purification. The LSP process provides a consistent increase in intrinsic viscosity (IV) levels, with precise control and stability over extended operations. Rigorous challenge testing has proven its exceptional decontamination efficiency, meeting and exceeding the highest food safety standards.

### Exceptional results across all machine sizes

NGR submitted its complete dossier for the LSP process in July 2023 and engaged with EFSA to address all questions raised during the rigorous evaluation. The Positive Scientific Opinion, published on January 13, 2025, affirms the high decontamination efficiency of

NGR LSP-Process (Picture: NGR)

the LSP Technology for all four machine sizes currently available: P:REACT 600, 1200, 2000, and 3000.

### Pioneering innovation and excellence in PET recycling

"This recognition by EFSA is a testament to the innovative strength and technical expertise of our team," said Josef Hochreiter, CEO of NGR. "Achieving the first positive Scientific Opinion under the new regulation underscores our commitment to advancing sustainable, food-safe recycling technologies for a circular economy."

EFSA's Opinion serves as the foundation for final approval by the European Commission, after which the LSP process will be officially assigned its RAN and listed in the public register.

Full EFSA Opinion- **Safety assessment of the process NGR LSP used to recycle post-consumer PET into food contact materials:** <https://efsa.onlinelibrary.wiley.com/share/EWZFJS7ZPV9PSINMHJNA?target=10.2903/j.efsa.2025.9196>

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# Efficient Plastics Production – *Sustainability and Digitalization go Hand-in-Hand*

*In order to position themselves for the future, plastics manufacturers have to increase volume, quality and efficiency while operating sustainably, promoting the circular economy and offering attractive jobs all at the same time. How can they do that? The best way is through exchanges with other experts – something currently being demonstrated by the cooperation between Hexpol TPE and the process technology provider, MAAG.*

From the yellow bag into a dashboard: thanks to high-quality plastics recycling, this circular economy is no longer a pipe dream. But creating compounds with properties that meet the high expectations of companies in the automotive sector and other demanding industries calls for high level of process engineering expertise. Anybody looking for this expertise will find it at Hexpol TPE in Lichtenfels. The company manufactures thermoplastic elastomers, soft PVCs, TPE compounds with TPS, TPO, TPV, and TPU, additives and masterbatches. Across the entire portfolio, great importance is attached to high-performance compounds with top quality and, increasingly, with a growing proportion of PIR and PCR plastics.

Particularly challenging in this context is the processing of contaminated and heterogeneous post-consumer recycled materials (PCR) – i.e. the materials collected by the dual systems.

## Higher quality as a challenge

The rising demand proves that Hexpol TPE is on the right track. In order to keep pace with the growing quality expectations, the company has purchased several new machines in recent years.

When it comes to pelletizing systems, the manufacturer has increasingly relied on the Pearlo machine series from MAAG. The underwater pelletizing system is designed to process a wide range of polymers and thermoplastics, promising profitable production with throughputs of up



Hexpol TPE Plant in Lichtenfels, Germany

to 42,000 kilograms per hour. Hexpol TPE decided to buy its first pelletizing system from the Pearlo series in 2017. In the following years, several further pelletizing systems were added to the machine park.

The latest investment, a Pearlo 160, was added in 2023 and is impressing in production just as expected: The machine is suspended above the production line. In this top-mounted configuration, the floor under all the components remains free and accessible because the machine is suspended from an overhead rail system. Quick-disconnect-adapters involve just one bolt, whereas previously twelve had to be loosened and then fitted again. "This offers immense time savings during assembly and cleaning of the system that can now be done much faster," reports Dominik Fehn, Process Engineering Manager at Hexpol TPE in Lichtenfels. Much less effort is required when a machine weighing 400 kilograms is suspended from the ceiling and can be moved with

one hand rather than being pushed on wheels.

As Hexpol TPE attaches great importance to reducing the workload on its employees, this system is a perfect addition to make life even easier for the workforce. MAAG offers two-axis machines that can be moved in two directions. This means production staff can clean and set up faster, and components do not have to be readjusted. "This is a huge and important reduction in workload, allows quick and stress-free retooling and saves unnecessary energy," emphasizes Fehn.

The new Pearlo has been proving its worth in Lichtenfels ever since. "We decided to take this step in order to increase production efficiency while reducing the workload," explains Fehn.

## Automation for greater efficiency

All the same, high quality alone is not enough to stay competitive on the international stage – the ef-



*Dominik Fehn, Process Engineering Manager at Hexpol TPE*

efficiency also has to be right. In order to enable Hexpol TPE to increase quality, efficiency, and sustainability in equal measure, the company launched its "Zero Waste" project in 2024. The goal: To significantly reduce waste from production, increase the efficiency of all processes, and automate the processes wherever possible.

Dominik Fehn also discussed this with well-established partners of the company – and found MAAG to have comprehensive consulting expertise: "I was really surprised by the wide range of workshops and training courses that MAAG offers on these topics," says Fehn.

### Workshop highlights potential

In a multi-day workshop on site in Lichtenfels tailored to the defined goals, MAAG provided support in identifying optimization potentials in all areas of production: machines and production planning, personnel and teamwork, as well as training courses.

The targeted workshop was split into different process steps, in which employees from the individual groups at the site were interviewed and involved in group work. First, open questions were used to identify the general potentials specific to the company; the results were then grouped and prioritized, and areas for optimization were identified. Once the ice had been broken, any potential for improving the machines was identified and the resulting measures were prioritized.

### Cause-and-effects analysis

The subsequent cause-and-effects analysis characterized the results and put them into a structure. The work results obtained here were grouped, summarized according to lean principles, and the resulting tasks were prioritized.

Finally, all arguments for solutions were identified and classified according to the following criteria:

feasibility and impact, difficulty of implementation, implementation costs, and determination of the implementation priorities. After identifying the "take a closer look" arguments, including a definition of the options to be considered, the "don'ts" were of course also derived.

The results of the workshop: Factors directly related to the machine – such as the selection of die plates and knife heads, the use of optimized/predefined process settings, or the planning of maintenance intervals – can contribute to optimization. Much greater potential was identified, however, in



*PEARLO 160 production line*

factors such as the better utilization of talent within the company, more teamwork, the avoidance of waiting times and excessive processing, or simply reducing over-production. The path to achieving this lies in greater data availability and transparency in order to enable the necessary steps to be identified.

Whether through automation or process optimization, Hexpol TPE expects digitalization to result in higher efficiency and better working conditions in all areas. "We will be investing in this further development over the next few years," says Dominik Fehn.

### Conclusion

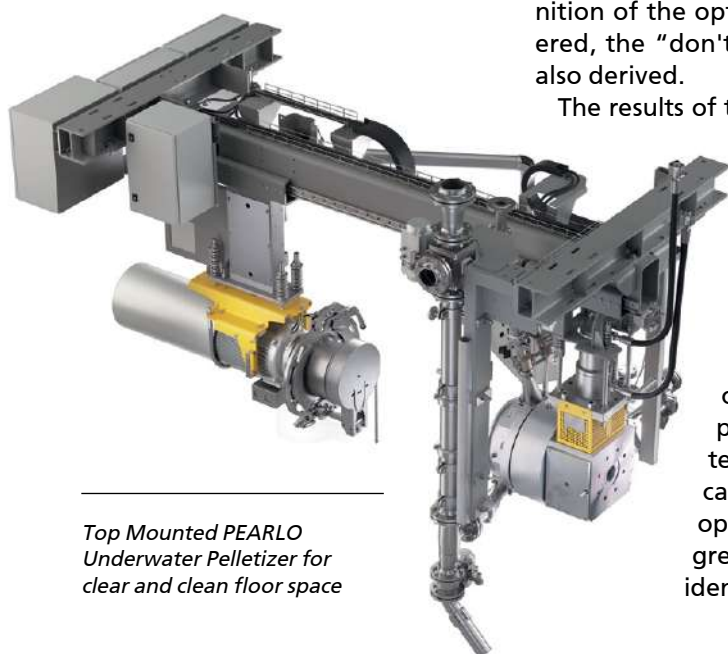
The collaboration between Hexpol TPE as operator and MAAG as plant supplier shows that high-quality, sustainable products need reliable, high-performance machines and plants. But digitalization and smart systems are the key to the future of plastics production that both conserves resources and relieves the burden on the employees.

### Author

*Michael Eloo,  
Director Innovation & Business  
Development at MAAG Group*

**MAAG Group**

<https://MAAG.com>



*Top Mounted PEARLO  
Underwater Pelletizer for  
clear and clean floor space*



# Large Containers, Small Footprint – *IBC Container Recycling*

*The Danish company Dansk Emballage, located in Vamdrup, specializes in the collection and reprocessing of Intermediate Bulk Containers (IBC). The containers are sorted, washed, and recycled on-site. A significant role in this process is played by a WEIMA W5.18 single-shaft shredder.*



*The brand-new recycling line: A WEIMA W5.18, a granulator, and a friction washer*

**D**ansk Emballage brings over 30 years of experience in trading new and reconditioned industrial packaging such as IBCs, drums, jerrycans, and pallets. The company collects these packages, cleans, repairs, and recycles them in an ISO 9001 and ISO 14001 certified process. When reconditioning is not possible, the bottles from the IBCs are subjected to material recycling. The same concept applies to plastic drums and cans. The containers come from companies in the chemical and food industries throughout Scandinavia.

"Every day, our employees work on a mission: to do something good for the environment. With our customized and intelligent solutions, we continuously optimize the recycling cycle for the benefit of our planet. Plastic is not a bad material but a good one when it is recycled and not burned or disposed of in nature," says Martin Schack Staffeldt, Managing Director of Dansk Emballage in Vamdrup, Denmark.



*Empty IBC containers on the premises of Dansk*



*Shredded IBC containers*



*High-quality and clean recyclate after the recycling process*

### Heart of the Recycling Line: The WEIMA W5.18

The WEIMA W5.18 single-shaft shredder is ideal for shredding large volumes of plastics. It features a V-rotor with a diameter of 500 mm and a rotor length of 1,800 mm. The Siemens PLC control system with an intuitive touch panel makes the shredder easy to operate. A generously sized inspection hatch ensures convenient access for maintenance work. The owners are also impressed with the material feed:

"The swing ram transports the IBC containers very quickly and thoroughly to the rotor. These are partly 16-kilogram IBCs, and within a short time, shredded plastic pieces measuring 60 mm come out. We are very satisfied with the result," says Martin Schack Staffeldt.

### Innovative Additions for Maximum Results

The shredding process at Dansk Emballage is optimally tailored to plastic applications. Before shredding, all grids, pallets, and valves are removed from the cans, drums, or IBCs, leaving only pure plastic.

Thanks to an integrated and automated water injection system in the shredder's cutting chamber, the containers are pre-washed during shredding. This cleans the containers of coarse residues and significantly reduces the risk of fire.

Dansk Emballage has also opted for additional rotor wear protection. This ensures the rotor is well-protected against foreign objects and abrasive materials. A camera installed inside the shredder allows for continuous monitoring of the process.

The pre-shredded material is then transported to a granulator for further size reduction. This is followed by a friction washer. The combination of granulator and friction washer enables effective shredding and cleaning of plastic waste. The granulator ensures further reduction of material size, while the friction washer removes contaminants to provide clean granules for further processing. These two processes are crucial for the quality of the recyclate and the efficiency of the entire recycling process.

### Circular Economy: Turning Old into Valuable

Dansk Emballage uses 35% of the recycled material to produce new IBCs – a closed-loop system that is highly appreciated by customers.

The decision to choose WEIMA was made after a thorough evaluation of various suppliers. "We looked at many different potential suppliers for the shredder and ultimately chose WEIMA. And we are very satisfied with it," says Martin Schack Staffeldt.

The comprehensive service and support from the local WEIMA representative in Denmark have significantly facilitated the implementation and operation of the shredder.

**WEIMA Maschinenbau GmbH**  
Bustadt 6-10, 74360 Ilsfeld, Germany  
→ [www.weima.com](http://www.weima.com)



*The heart of the recycling plant:  
The WEIMA W5.18*



# Recyclable Mono-Material Structures – *Flexible Packaging with MDO-PE on the Rise*

*With increasing requirements on recyclability, interest in mono-materials is rapidly growing. Machine Direction Oriented Polyethylene film – or MDO-PE film – is playing a key role at the production of easy-to-recycle mono-material structures for flexible packaging.*



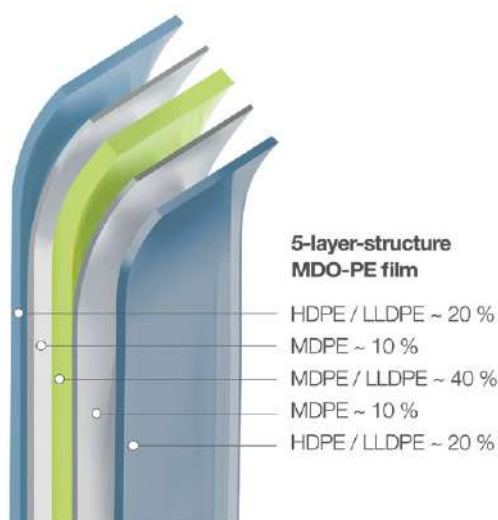
Cast MDO Barriere

**"D**ue to its properties, MDO-PE film is an ideal solution when it comes to replace PET in PET-PE laminates, which were used for a variety of flexible packaging products as a standard so far", Elias Mayrhofer, Product Manager at extrusion line manufacturer SML explains. Application areas of MDO-PE film range from mono-material tubular bags for food packaging to side gusset bags, and from sealed bags to different types of pouches.

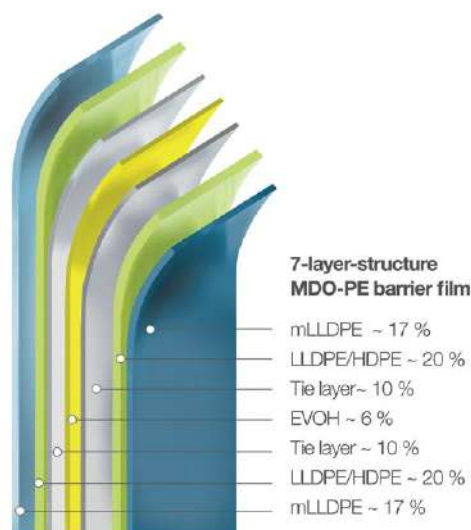
## Straight-forward further processing

MDO-PE film manufactured on SML's latest cast film lines with integrated MDO unit provide excellent optical, mechanical and barrier properties. The film can be easily laminated to mono-material structures, for example with CPE sealant film on a FlexPack line from SML. "Cast MDO-PE films exhibit excellent printability and have been successfully tested on both Flexographic and





5 layer structure MDO-PE



7 layer structure MDO-PE barrier

Rotogravure printing systems. Metallisation is possible without any complications even with ultra-thin MDO-PE films", Elias Mayrhofer states.

### Wide variety of different film properties

The cast MDO technology allows the production of a wide variety of different types of MDO-PE film:

#### Ultra-thin film down to 15 µm

SML cast film lines are ready to manufacture MDO-PE film as thin as 15 µm. "It goes without saying, that even at the most ultra-thin film the process is completely stable. There are no compromises when it comes to performance, functionality and printability," Elias Mayrhofer says. A market-ready 15 µm MDO-PE film developed at SML in close cooperation with its polymer supplier and long-term partner Dow Packaging & Specialty Plastics has the following structure (Picture 2):

#### 17 µm film with an EVOH barrier layer of less than 1 µm

This ultra-thin barrier film was developed by SML in collaboration with Dow Packaging & Specialty Plastics and EVAL Europe N.V. (a Kuraray company). It comes with this layer distribution (Picture 3):

The film has been extensively tested and is ready for the market. It is characterised by the following barrier properties, given a stretching ratio of 1:5:

OTR: 1 – 3 cm<sup>3</sup>/m<sup>2</sup>/24hr \*

\* Oxygen transmission rate at 23 °C; 50 % RH, testing method: ASTM F1927-07

WVTR: 5 – 8 g<sup>2</sup>/m<sup>2</sup>/24hr \*

\* Water vapour transmission rate at 38 °C; 90 % RH, testing method: ASTM F1249-06

### Up to 65 µm MDO-PE film for extended application areas

The production of ultra-thin MDO-PE films of the highest quality is by no means the only possible application at the latest generation of SML cast film lines. The achievable thickness range for fully stretched MDO-PE films goes up to 65 µm which opens up a variety of other possibilities for film manufacturers. Especially with regard to packaging goods that require higher barrier functions or enhanced mechanical properties.

#### Integrated sealing layer: Ready-to-use film straight from the line

A further functional advantage of manufacturing MDO-PE film in the cast process is the option to directly integrate a sealing layer. This makes it possible to produce a completely ready-to-use film straight off the line, for example for products such as stand-up pouches.

#### Cast technology for unparalleled film quality

Generally, MDO-PE films produced in a cast process attain an excellent level of transparency. A superior film quality is reached through optimum flatness and the ideal distribution of thickness during production.

SML Maschinengesellschaft mbH  
Gewerbepark Ost 32, A-4846 Redlham, Austria  
[www.sml.at](http://www.sml.at)

# PET Recycling Quality taken to the Next Level

*Doğa PET, a new recycling venture by Doğa Holding, one of the largest conglomerates in Türkiye, is using TOMRA Recycling's sensor-based sorting solutions to produce high-quality PET flakes and rPET granules which are suitable for food and textile applications.*

**D**oğa Holding has diversified its investment portfolio within Türkiye by making an impressive entry into the recycling sector. Doğa PET, a subsidiary of Doğa Holding, is using TOMRA's sensor-based sorting machines to produce premium quality PET flakes and rPET granules from post-consumer PET which are suitable for food and textile applications.

Located in northwestern Türkiye, Doğa PET's plant currently processes more than 4,200 tons of PET bottles monthly, producing 3,000 tons per month of PET flakes and 2,000 tons per month of rPET granules. The facility incorporates TOMRA's full range of machines for plastics sorting: four of the company's sorting all-rounder AUTOSORT™, as well as two INNOSORT™ FLAKE and two AUTOSORT™ FLAKE units for advanced flake sorting and purification. This combination of units optimizes both product quality and processing capacity.

Depending on Doğa PET's customer requirements, the premium PET flakes – produced in various quality grades – are used for PET sheet production, while the rPET granules are mainly aimed at bottle-to-bottle recycling and high-quality textile applications. The company plans to export its recycled products, primarily to European countries.

## Achieving exceptional purity levels with TOMRA technology

Dr. Selçuk Gökhan Gerlikhan, General Manager of Doğa PET, comments: "PET recycling has gained significant momentum in recent years. Instead of recycling PET waste into lower-value materials, it is crucial to use advanced technological infrastructure to recover it and produce materials with properties closely resembling those of virgin raw materials. TOMRA has been an invaluable partner since the start of this project. TOMRA's solutions are widely recognized as industry benchmarks by our customers, so we plan to invest in additional sorters as we develop our lines."

Commenting on the speed at which the plant achieved the targeted purity levels in its initial operations, Dr. Gerlikhan said: "We separate purity levels into two categories: polymer and color. Our target for polymer purity was 99.998% for the final product, and we achieved this. For color, our goal was to reach a purity level of 99% transparent PET in the final product. This includes reducing other colors, such as light blue PET, to below 1%. We have already exceeded expectations by achieving color variations below 0.5%."



*Doğa PET is using TOMRA's sorting solutions to produce high-quality PET flakes and rPET granules*

## Minimizing loss of light blue PET material while maximizing purity in clear

While producing clear flakes, Doğa PET aims to minimize the loss of light blue PET material and, when necessary, separates the light blue material from the clear one. The blue bottles, which are ejected when processing clear PET, can be a valuable resource for other applications.

Doğa PET is the first facility in Türkiye to successfully separate light blue material from clear material, regardless of the infeed product. During the sorting process, light blue products are separated from all infeed materials and recovered for reuse as needed.

Serkan Orhan, Sales Manager for TOMRA Recycling Sorting in Türkiye and the Middle East, explains the full process: "The plant's production line features four AUTOSORT™ units which pre-sort the PET bottles. The first three sort by material and color before sending them to





The facility's sorting machines include four AUTOSORT™, two INNOSORT™ FLAKE and two AUTOSORT™ FLAKE units

the subsequent crushing and washing line. The fourth AUTOSORT™ unit re-sorts the rejected products from the first three units, sending recoverable materials back to the first AUTOSORT™ to improve efficiency and material recovery.

"After pre-sorting, the material is crushed, washed and dried before being sorted by target colors using the INNOSORT™ FLAKE, TOMRA's highly flexible color and polymer flake sorting machine. Finally, the flakes are sent to the AUTOSORT™ FLAKE unit, a specialist solution for high-end flake sorting applications such as food-grade bottle-to-bottle recycling. At this sorting stage, the targeted high purity is achieved thanks to the reliable separation of color, polymer and metal contaminants, virtually eliminating all traces of PVC, PC, PS and other unwanted polymers."

### Advanced waste analysis

Doğa PET is required to prove that less than 5% of the input material for its washing process consists of non-food grade PET to produce food-grade pellets. To meet this requirement and enhance material recovery across its sorting lines, the company has invested in a state-of-the-art waste analyzer powered by PolyPerception, a solution that uses cameras for real-time material analysis and classification at key points in the sorting plant. At Doğa PET's plant, the analyzer is positioned before the last of four AUTOSORT™ units. It continuously monitors and analyzes the quantity of non-food grade PET bottles destined for the washing line.

By providing data per batch or shift, the analyzer enables Doğa PET to certify the food-grade quality of material from each specific production period, offering crucial reassurance to both its customers and relevant certification bodies. This transparency is particularly vital for end customers purchasing these pellets from a Turkish PET facility. Exporting its high-quality product



Dr. Gerlikhan: "For us, using TOMRA's state-of-the-art sorting systems is crucial."

to Europe, Doğa PET relies on this assurance to meet its customers' stringent compliance requirements.

### The crucial role of quality in filament-grade textiles

While Doğa PET invests in high-quality food-grade rPET granules for bottle-to-bottle recycling, the company also applies the same approach to supplying raw materials for the textile industry. Dr. Gerlikhan comments: "The filament sector in textiles demands very high purity levels and color stability. The durability, aesthetics and functionality of the final fiber product depend heavily on the proper management of the PET recycling process when producing high-quality rPET granules. Accurate sorting is critical for increasing rPET granule purity. For us, using TOMRA's state-of-the-art sorting systems is crucial as they ensure efficient and fast recycling processes."

Serkan Orhan concludes: "We are delighted to have been by Doğa's side from the very beginning on this project, consulting on the feasibility study. Achieving the desired capacity and quality levels in such a short period of time with such vast inputs has been a great achievement which demonstrates how advanced sorting technology contributes to achieving virgin-like material qualities."

# Inline Measurement of Wall Thickness, Eccentricity and Diameter

*Wuxi Huacheng Cable Co., Ltd., based in Jiangyin City, is a specialist in manufacturing special high temperature resistant cables. The company relies on SIKORA's X-RAY 6000 PRO to ensure optimal processes and the highest product quality. Since 2018, Huacheng Cable has used seven sets of SIKORA X-ray technology for quality control in seven new energy cable extrusion production lines that effectively leads to perfect monitoring and controlling of parameters of cable during the production.*

Quality and performance requirements for new energy cable are extremely high. All parameters, such as diameter, wall thickness and eccentricity must comply with specifications. Several measuring methods for quality control are available on the market. Due to its functionality, however, SIKORA X-ray technology has proven itself as a leading method for measuring new energy cable.

"With the X-RAY 6000 PRO we can use the full potential for process optimization and to deliver the high-

*The production data is clearly displayed at the vertical, 22" wide-screen monitor of the ECOCONTROL 6000*



*Wuxi Huacheng Cable uses SIKORA's X-RAY 6000 PRO for measuring and control during new energy cable production*

est product quality to our customers", says Mr. Haihua Min, the general manager at Huacheng Cable. Directly integrated in the extrusion line the system allows to constantly monitor the wall thickness of up to three material layers and to reduce it to the minimum tolerance value. Safety margins can be successively reduced, and the automatic control keeps the dimensions within the specification.

Quality control in combination with material savings leads to a significant increase in productivity. In addition, by providing highest product quality, customer demands can be fulfilled, and customer satisfaction is achieved.

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Bruchweide 2, 28307 Bremen, Germany  
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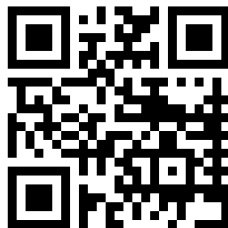


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