Press release

Scale, network, qualify

EREMA increases efficiency in post consumer recycling

A compact footprint and high throughput are increasingly decisive key parameters in post consumer recycling. EREMA is responding to this by upscaling the INTAREMA® series and launching the 2021 model without a cascade at the K 2025. Another trend is the increasing number of food-grade applications, with EREMA supplying recycling systems that guarantee the highest quality levels, and actively supporting its customers in the authorisation process. A factor that increases added value in post-consumer recycling is the company's joint venture with Lindner Washtech, ensuring a well-balanced end-to-end process.

Ansfelden, 17 June 2025 - Legal requirements, above all the EU packaging and packaging waste directive (PPWR), and the sustainability goals of global brands are increasing the demand for post-consumer recycled pellets to be used in sensitive applications such as food or cosmetics packaging, as well as in secondary packaging. These specifications increase the demands on the production capacity and process stability of recycling plants in order to guarantee high output volumes with a consistently high quality. EREMA offers reliable solutions to meet these specifications.

The new INTAREMA® 2021 TVEplus®, now without cascade

Large plastics recycling plants need more than simply upscaling the individual components. The larger the size of the extruder screw, the greater the technological challenges. The start-up last summer of the largest INTAREMA® system to date, with a throughput of over four tonnes per hour, confirms that EREMA offers reliable solutions for high throughputs. The next smaller size 2021 has now been further developed. "We have focused on the system and its individual components to ensure cost effectiveness and process reliability on this scale," explains Markus Huber-Lindinger, Managing Director at EREMA. At the K show, EREMA will launch the INTAREMA® 2021 TVEplus® with a diameter of 2 metres for the preconditioning unit (PCU) and 212 millimetres for the extruder screw, which for the first time features a single end-to-end extrusion unit. With a throughput of up to 3.5 tonnes per hour and a footprint of just 15.1 x 3 metres, this recycling system is over two metres shorter than the previous cascade design, in which two extruders were connected by a melt pipe. The new design also reduces the melt temperature, lowers energy consumption and minimises maintenance requirements.

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Based on TVEplus® and EREMA PCU technology, the new 2021 produces even higher quality recycled pellets. Counter Current® technology makes a significant contribution to this because it continuously feeds the extruder with preheated material that is 5 to 15 degrees Celsius warmer than with conventional cutter compactor systems. This is a technological advantage, especially for an extruder screw with a large diameter with correspondingly deep screw flights. The melt is processed more gently with less shearing and without additional particle size reduction. This makes it easier for impurities to be extracted by the melt filter, which is a key element of the new development. "It is thanks to our latest innovation in filtration that we have been able to implement the system on this scale. We will be demonstrating this innovation live at K 2025," says Markus Huber-Lindinger. The system is also available with DuaFil® Compact technology for even more efficient filtration.

The ReFresher control system is now networked with the PLC

Consistently high recycled pellet quality is essential for food and cosmetic grade applications. Recyclates for food packaging must meet the requirements of the European and American food safety authorities. EREMA has initiated numerous approval projects and, together with customers, has already received positive Non Objection Letters (NOL) from a US authority for HDPE, PP and LD/LLDPE. Further approval proceedings are ongoing, especially in Europe. "A key driver of these projects is the new EU Packaging and Packaging Waste Regulation (PPWR), which stipulates a recyclate content of 10 per cent in sensitive packaging and 30 per cent in all packaging from 2030 onwards," explains Clemens Kitzberger, Business Development Manager Post Consumer Recycling at the EREMA Group. "We are confident that we will obtain these approvals with our technologies. We use our expertise to provide our customers with the support they need during the proceedings."

There are two decisive prerequisites needed for food-grade: an input stream consisting of at least 99 per cent food packaging, and technology that is able to clean and decontaminate the input material. A key technology here is the combination of INTAREMA® TVEplus® RegrindPro® and the ReFresher, which reliably removes substances with low volatility, and as a result also removes odours. "What's new is that the ReFresher control system is networked with our machine PLC," says Markus Huber-Lindinger. "The new visualisation system combines the data from both systems to provide an intuitive and in-depth understanding of the entire process chain." The combined data and trend analyses can also be accessed using the BluPort® online platform.

EREMA and Lindner Washtech guarantee a balanced overall process

"One of the main success factors for consistent recyclate quality from post-consumer waste streams is the optimal coordination of each process step, from sorting and recycling to the final product," says Clemens Kitzberger. Openness for knowledge transfer is needed here along the whole value chain.

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That is why EREMA works together closely with strong partners, including within its own group of companies. The joint venture with Lindner has established a close partnership between EREMA and Lindner Washtech. While Lindner Washtech provides high-quality preparation of the input material with sorting, cold and hot washing, EREMA ensures effective cleaning and decontamination with its extrusion and filtration technology. Because the processes are well-coordinated, consistent recyclate quality is produced with optimised energy consumption. One specific application example is a project at Polymer Matters in Ireland, who have applied to the European Commission for food-grade approval. In this application, HDPE milk bottles from household recycling schemes are processed into rHDPE and used for the production of new milk bottles.

Visitors to this year's K trade fair can gain an insight into the successful joint venture between EREMA and Lindner Washtech at the *Edvanced Recycling* Centre in the outdoor area.

Edvanced Recycling powered by EREMA

The current campaign *Edvanced Recycling - EREMA Prime Solutions for Advanced Recycling* sees EREMA present a wide range of advanced plastics recycling solutions. More than 40 years of experience combined with practical application expertise are the basis for EREMA systems consistently delivering high-quality recycled pellets to meet precise quality specifications, from food and cosmetic grade to more straightforward applications. *Edvanced Recycling* shows how EREMA is working together with its customers to sustainably increase the proportion of recycled materials used to make new plastic products. All the information is available online at edvanced.erema.com

Find out more and visit EREMA at K 2025: **Hall 9, Stand: C09**
and at the *Edvanced Recycling* Centre: **Outdoor area, CE03**

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Photos:

From used milk bottles back to the shelf: Polymer Matters in Ireland shows how successful post-consumer recycling works in the real world. Together with Lindner Washtech, EREMA supplies the technologies used to efficiently process HDPE milk bottles from household recycling schemes to make food-grade recycled pellets. The EU approval procedure is already underway. The photo shows (from the left): Clemens Kitzberger (EREMA), Patrick Cunningham (Strathroy Dairy), Michael Cunningham (Polymer Matters), Marcel Willberg (Lindner Washtech).

Photo credits: EREMA GmbH

EREMA Engineering Recycling Maschinen und Anlagen GmbH

Since its founding in 1983, EREMA Engineering Recycling Maschinen und Anlagen Ges.m.b.H has specialised in the development and production of plastics recycling systems and technologies for the plastics processing industry and is regarded as the global market and innovation leader in these sectors. The company is part of the Austrian group of companies EREMA Group GmbH based in Ansfelden/Linz, which employs around 920 people worldwide

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