

## KraussMaffei Extrusion at K 2025: Pioneering the world of extrusion - with expertise, passion and clear customer focus

- Combination of mechanical engineering and process technology at the highest level
- Innovative processes for the petrochemical industry
- Economical recycling solutions for a sustainable plastics industry
- High-performance PVC multilayer pipe head for processing up to 100% recyclate
- Tailor-made lifetime service for maximum system efficiency

(Düsseldorf/Laatzen, June 16<sup>th</sup> 2025) Performance. Perfected. For you under this motto, KraussMaffei will be demonstrating at K 2025 (Düsseldorf, October 8<sup>th</sup> – 16<sup>th</sup>) how cutting-edge technologies and a strong customer focus deliver measurable added value. The spotlight in extrusion technology is on solutions for more efficient and future-proof plastics processing – from large-scale industrial polymer manufacturing to pipe and profile extrusion and to cost-effective recycling processes. The trade fair presentation will be complemented by digital innovations paving the way towards smart, low-operator production.

"Performance. Perfected. For you. reflects our commitment to delivering advanced extrusion solutions – technically refined, highly efficient, and consistently geared to the requirements of our customers", says Ralf Benack, Managing Director of KraussMaffei Extrusion GmbH. "Our strength lies in the combination of highly developed mechanical engineering and deep process know-how – all from a single source, reliably delivered worldwide."

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The development roadmap for the coming years is clearly defined: "We are working specifically on new developments to continuously increase customer benefits, actively maintaining our products and resolutely driving forward the digitalization and automation of our products." This is how KraussMaffei Extrusion is creating the foundation for sustainability, economic success and technological progress. "And we are making this tangible for visitors at K 2025 in Düsseldorf," says Ralf Benack.

# Future market petrochemicals: New processing extruder for raw polymer production

One of the recent key developments is the new generation of ZE Petrochemical (ZE-PC) compounding extruders, purpose-built for the demanding needs of large-scale polymer production. Based on the proven BluePower technology, the co-rotating twin-screw extruders – available with screw diameters up to 400 mm – combine energy efficiency with high processing quality.

"Thanks to a D/d ratio of 1.65, torque densities of up to 16 Nm/cm³, and variable-speed drives, the machines can run at lower screw speeds without compromising throughput. This lowers the specific drive power and reduces the melt temperatures, which lowers the risk of degradation," explains Dr. Thomas Unger, Vice President Technologies at KraussMaffei Extrusion. At the same time, the larger diameter ratio ensures significantly more effective degassing. "This allows us to offer our customers an economical, reliable and material-friendly solution," he adds.

#### More output, less investment - optimized recycling processes

From bottle-to-bottle PET recycling to material preparation for chemical processes - as a driver of innovation in the circular economy, KraussMaffei Extrusion offers pioneering solutions for all forms of recycling.

In the PET recycling sector, KraussMaffei Extrusion is presenting a highperformance twin-screw system based on the BluePower series for throughputs of up to 12 tons per hour. The concept responds to the KraussMaffei Technologies GmbH Marketing Department Krauss-Maffei-Strasse 1 85599 Parsdorf/Germany



increasing demand for higher output and more energy- and cost-efficient processing. Compared to conventional twin-screw systems, energy consumption can be reduced by up to 20%. The systems are compatible with standard SSP units and produce food-grade rPET.

In chemical recycling, KraussMaffei Extrusion is focusing on key technologies: high-performance extruders for processing material streams - for example, to produce pyrolysis oils - efficiently implement crucial process steps such as dewatering, degassing and the removal of impurities. Pressures of up to 200 bar and the retractable UltraGlide system with easy-to-maintain screws enable customized solutions for demanding recycling applications.

KraussMaffei Extrusion has also refined its EdelweissTechnology for processing recyclates more efficiently – even with fluctuating material properties. The focus is clearly on process optimization and cost efficiency. The twin-screw extruder covers all process steps: degassing, filtering and compounding. "This integrated setup can lower investment costs by up to 25%," says Dr. Thomas Unger.

### More efficient research, more economical production:

### ZE BluePower in a new design

Whether for research or daily production - the new generation of the ZE BluePower twin-screw extruders offers clear advantages. The new ZE 28 BluePower scores with improved operation, greater energy efficiency and digital networking via ppC (pioneer processControl). The larger ZE 42-80 series has also been comprehensively redesigned - with a focus on simple maintenance, digital interfaces and an optimized modular system. "For our customers, this means a better price-performance ratio and shorter delivery times - real advantages in day-to-day operations," says Dr. Thomas Unger.

#### New multilayer pipe head processes up to 100% recyclate

With its newly developed PVC multilayer pipehead, KraussMaffei Extrusion is demonstrating how pipe and profile extrusion can be made more sustainable and future-proof. The system processes up to 100% recycled

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PVC - even with varying material quality. The layer configuration can be flexibly adjusted depending on the application. A newly designed flow system prevents spiderlines and ensures consistent product quality with optimal material usage.

### Digital transformation: rethinking machine control

With the new ppC (pioneer processControl) control system, KraussMaffei is bringing greater clarity and efficiency to extrusion processes. Instead of complex operating logic, ppC relies on intuitive processes, clearly structured user guidance and a unified user interface. This shortens the learning curve, reduces the amount of training required and makes everyday production easier. Its modular design enables use across all extrusion tasks - from Flat & Foam to Pipe & Profile through to Compounding and Recycling.

Integration into existing systems is also easy: interfaces for connecting to third-party devices such as metering devices, measuring systems and higher-level systems such as MES or DCS enable the central operation and monitoring of entire systems. This ensures greater transparency and process reliability.

### Looking ahead: on the way to production without operators

In view of growing staff shortages, KraussMaffei Extrusion is developing digital tools for production without operators (PWO). Start-up workflows, Alsupported assistants and HMI solutions for mobile use make it easier to monitor entire lines - with fewer personnel. The first systems are already running unmanned at weekends - a milestone towards lights-out manufacturing.

### Tailor-made Lifetime Service for maximum system efficiency

With its Lifetime Service, KraussMaffei Extrusion offers a comprehensive service concept that goes far beyond routine maintenance. "From commissioning and targeted modernization and data-based services, we support our customers throughout the entire life cycle of the system - reliably, proactively and with personalized solutions," says Ralf Benack. Whether it's spare parts, remote support, training, or digital condition

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monitoring, the goal is always the same: maximum plant availability, consistent product quality, and a sustainable boost in overall efficiency.

#### Performance. Perfected. For you.

KraussMaffei Extrusion's presence at K 2025 underlines its commitment to combining innovative technologies, sustainable solutions and maximum cost-effectiveness in perfectly coordinated system solutions - individually tailored to customer requirements along the entire polymer processing value chain.

KraussMaffei at K 2025 Hall 15, Stand C24

01\_PM\_K-Previews 2025\_EXT\_New pipe head.jpg
The new PVC multilayer pipe head - presented for the first time at the
TecDays World of Extrusion in March 2025 in Laatzen/Germany - allows the
processing of up to 100% recyclate

02\_PM\_K-Previews 2025\_EXT\_ppC.jpg
With ppC (pioneer processControl), KraussMaffei Extrusion offers an integrated control platform for all extrusion applications

03\_PM\_K-Previews 2025\_EXT\_ZE BluePower.jpg

More efficient research, more economical production: The new generation of the ZE BluePower

04\_PM\_K-Previews 2025\_EXT\_Recycling.jpg

As a driver of innovation in the circular economy, KraussMaffei Extrusion offers pioneering solutions for all forms of recycling - from bottle-to-bottle PET recycling to material preparation for chemical processes. (View of the Technology Center Laatzen/Germany)

05\_PM\_K-Previews 2025\_ZE-Petrochemical.jpg

New twin-screw extruder ZE Petrochemical (ZE-PC): With screw diameters of up to 400 mm and proven BluePower technology, the new generation

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combines maximum energy efficiency and processing quality for use in large-scale industrial polymer production.

Photos: KraussMaffei

Further information and images in print quality are available at www.kraussmaffei.com

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#### KraussMaffei - Pioneering Plastics

KraussMaffei is one of the world's leading manufacturers of machinery and systems for the production and processing of plastics and rubber. Our brand has been synonymous with cutting-edge technology for more than 185 years. Our range of products and services covers all technologies in injection molding, extrusion and reaction process machinery. In 2022, we expanded our portfolio to include additive manufacturing. With this broad spectrum of technologies, KraussMaffei has a unique selling point in the industry. With a high level of innovation, we ensure sustainable added value for our customers across their entire value chain with standardized and individual product, process, digital and service solutions. With our range of services, we serve customers from the automotive, packaging, medical and construction industries, as well as manufacturers of electrical and electronic products and household appliances. KraussMaffei employs around 4,200 people worldwide. With more than 30 subsidiaries and over 10 production facilities as well as around 570 sales and service partners, KraussMaffei is represented close to its international customers. The company was founded in Munich in 1838. Today, KraussMaffei is part of Sinochem Holdings Corporation Ltd, one of the world's leading chemical groups.

Further information: www.kraussmaffei.com

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