

KraussMaffei at Chinaplas 2018: How to advance the future of injection molding digitally with Plastics 4.0

- Intelligent Industry 4.0 solutions are front and center at our trade show appearance
- The new MaXecution MES system ensures more transparency and reliability in production planning
- GX made in China and new all-electric PX series support the trend towards boosting quality and efficiency in China

(Munich, March 7, 2018) Productivity, quality and flexibility are the critical factors concerning plastics processors in the course of the fourth industrial revolution and ultimately decide their cost-efficiency and competitiveness. At Chinaplas 2018 in Shanghai (April 24 through April 27, Hall 2, Booth T01), KraussMaffei will present innovative injection molding machines and technologies in combination with groundbreaking Industry 4.0 solutions, with which customers can sustainably optimize their manufacturing.

Using the potential of Industry 4.0 optimally

"Industry 4.0 is an important topic concerning our customers in China. The motivation for implementing Industry 4.0 is certainly increasing wages or maybe the desire for seamless documentation and tracking, such as in the automotive industry. This is a great opportunity for us to position ourselves as a premium manufacturer because Industry 4.0 requires both first-class machines and correspondingly high-performance automation, control systems and interfaces", Jörg Wittgrebe, Vice President of Sales, Injection Molding Machine Department at KraussMaffei China.

KraussMaffei is bundling its Industry 4.0 solutions under the umbrella brand Plastics 4.0. This includes intelligent, self-optimizing machine functions, reliable tools for seamless data acquisition and networking throughout production as well as range of worldwide services. In sum, they contribute to turning a manufacturing operation into an intelligent factory. "We see

**KraussMaffei Technologies GmbH
Marketing**
Krauss-Maffei-Strasse 2
80997 Munich, Germany

Phone +49 89 8899 2334
Press@kraussmaffei.com
www.kraussmaffei.com

ourselves as partners with our customers and support them in utilizing these opportunities and this potential in the best way possible," Wittgrebe adds. KraussMaffei will give you an idea of how this can look in practice through selected live demonstrations at their trade show booth at Chinaplas.

More transparency in production planning with MaXecution

One highlight at the KraussMaffei trade show booth is the new MaXecution, a manufacturing execution system (MES) specifically tailored to the demands of small and medium-sized injection molding companies. "The new MaXecution, which we are presenting for the first time to our customers in China at Chinaplas, creates more transparency in production using productivity indicators concerning, for instance, overall equipment effectiveness, mold management and resources and statistics on machines and rejects", Wittgrebe explains. The new MaXecution from KraussMaffei is based on the well-known HYDRA MES from MPDV Mikrolab GmbH (MPDV), the MES provider from Mosbach, Germany. It is offered in three stages of expansion. In this way, the customer can decide how many MES functionalities are needed based on the customer's individual requirements. If the customer requires additional functions beyond these services, the option is available to switch to the HYDRA by MPDV at any time. "With the new MaXecution and in collaboration with our partner MPDV, we support our customers in the long term on the path to digital, paperless production and offer them customized solutions for better utilization of their machine pool as well as for increasing their overall equipment effectiveness", says Wittgrebe. At the KraussMaffei trade show booth at Chinaplas, visitors can witness live how the manufacturing data for the injection molding process is recorded and evaluated. In addition, KraussMaffei will provide information on useful MES functions in plastics processing in several brief presentations each day.

GX 650-4300: The fastest two-platen machine in Asia

Another highlight at the KraussMaffei booth is the GX 650-4300 with the new LRX 150 linear robot. "Quality and efficiency criteria are becoming increasingly important for our customers in China, especially as part of the government-supported 'Made in China 2025' project. We are offering our customers a customized premium solution with the GX series, which

**KraussMaffei Technologies GmbH
Marketing**
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80997 Munich, Germany

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Press@kraussmaffei.com
www.kraussmaffei.com

provides precision, speed, modular design, user-friendliness and durability," says Wittgrebe. The GX series has also been manufactured in Haiyan, China, since 2016 in accordance with KraussMaffei's world-wide quality standards. Due to its extremely short dry cycle time, the GX series is regarded as the fastest hydraulic two-platen machine in Asia. As it is produced locally, customers in China and the rest of Asia also benefit from short delivery times and fast service.

The GX series is suited for both high-volume projects with aggressive cycle times and technically sophisticated applications, such as those in lightweight automotive construction. At Chinaplas, a GX 650-3400 with a clamping force of 6,500 kN will demonstrate the high process reliability of cascade injection with its perfect repeat accuracy. A radiator grill is created in cycle times of about 49 seconds. The connected FlexFlow hot runner control ensures a perfectly balanced cascade calibration. The result is premium quality components free of joint lines that can immediately be painted and galvanized.

PX 160-540: Faster speed with thin-walled snap-on closures

Thin-walled parts need power during injection. The fully electric PX 160-540, the machine on which flip-top snap-on closures of the Fontane type are being manufactured during Chinaplas, thus has a boosted injection speed of 270 mm/s. The sealing caps, made of polypropylene, have a diameter of 28 mm and are designed with the 1881 short thread—making this a classic packaging application. "The high output quantities in this area require especially short cycle times. Therefore, the PX 160 is equipped with speed options: faster injection, faster ejection, increased torque and faster nozzle movement," says Wittgrebe. The compact automation system with the LRX 100 linear robot removes the covers from the mold and places them into an integrated automation unit in which they are closed. The bottom line is that this saves time and space compared to familiar solutions on the market such as in-mold closing and separate covering process. "The PX 160 at Chinaplas will impressively combine the advantages of a high-precision, all-electric injection molding machine and self-optimized control system with linear automation and fully automated downstream equipment using minimal space and with maximum efficiency. In this way, we support our customers in the

**KraussMaffei Technologies GmbH
Marketing**

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Press@kraussmaffei.com
www.kraussmaffei.com

long term on their path to fully automated manufacturing," Wittgrebe explains.

GX 600-3000: Brilliant visible components for consumer electronics

A GX 600-3000 creates exciting surface effects for a 13-inch laptop housing using inductive mold heat-balancing in partnership with Roctool (HP plastics). Wittgrebe summarizes the advantages of the technology by saying, "The design options are immense. Whether it is shades of colors, hologram, glossy or matte effects, everything can be done in the one-shot process without additional processing such as film decoration or (secondary) painting." At the trade show exhibit, an LRX 350, the new linear robot generation from KraussMaffei, will ensure secure and precise component demolding. The optimized kinematic unit and the new air pressure saving function support this energy efficient manufacturing. Following Chinaplas, the GX 600 will go to the new Roctool TechCenter in Shanghai and will be available for customers and interested parties for trials and development.

With APC plus, every part is a good part

All three of the featured products, GX 650, GX 600 and PX 160 are equipped with the expanded APC plus function, another service of the Plastics 4.0 solutions from KraussMaffei. "The APC plus function ensures extremely weight-consistent components and the highest process reliability. This ensures that virtually every part is a good part. This saves materials and therefore, money," says Wittgrebe summarizing the advantages. The intelligent APC plus machine function is suited for processing thermoplastics, for multi-component injection molding or for processing silicone. Special applications such as thin-walled parts or cascade injection molding are possible. Furthermore, APC plus allows for processing recycled material.

KraussMaffei at Chinaplas

Hall 2, Booth T01

PM_KM_2018_02_Chinapas MaXecution.jpg

Greater transparency in production: With the new MaXecution MES system,

**KraussMaffei Technologies GmbH
Marketing**

Krauss-Maffei-Strasse 2
80997 Munich, Germany

Phone +49 89 8899 2334
Press@kraussmaffei.com
www.kraussmaffei.com

KraussMaffei supports its customers in the long term on their path to digital, paperless production

PM_KM_2018_02_Chinapas GX series.jpg

Due to its extremely short dry cycle time, the GX series is regarded as the fastest hydraulic two-platen machine in Asia.

PM_KM_2018_02_radiator grill.jpg

Immaculate: The radiator grill produced in the cascade injection molding is free of joint lines and can be immediately painted and galvanized.

PM_KM_2018_02_PX 160.jpg

More speed for flip-top snap-on closures: At Chinapas, the all-electric PX 160-540 produces thin-walled caps for the beverage industry.

Photos: KraussMaffei

Enclosure: Pictures and more information can be found at

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Press contact:

Petra Rehmet

Press officer KraussMaffei brand

Phone: +49 (0) 89 8899 2334

Email: petra.rehmet@kraussmaffei.com

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About KraussMaffei

The KraussMaffei product brand is internationally recognized for its groundbreaking, multitechnology system and process solutions for injection and reaction molding technology and factory automation. With its standalone, modular or standardized machinery and systems, and a wide, customizable service offering, KraussMaffei is a full-system partner for customers in many industry sectors. KraussMaffei bundles many decades of engineering expertise in plastics machinery and is headquartered in Munich, Germany. For more information: www.kraussmaffei.com

About KraussMaffei Group

The KraussMaffei Group is among the world's leading suppliers of machinery and systems for producing and processing plastics and rubber. Its products and services cover the whole spectrum of injection and reaction molding and extrusion technology, giving the company a unique position in the industry.

KraussMaffei Technologies GmbH Marketing

Krauss-Maffei-Strasse 2
80997 Munich, Germany

Phone +49 89 8899 2334
Press@kraussmaffei.com
www.kraussmaffei.com

The KraussMaffei Group is innovation-powered, supplying its products, processes and services as standard or custom solutions which deliver sustained added value along the customer's value-adding chain. The company markets its offering under the KraussMaffei, KraussMaffei Berstorff and Netstal brands to customers in the automotive, packaging, medical, construction, electrical, electronics and home appliance industries.

Continuing a long tradition of engineering excellence, the international KraussMaffei Group currently employs around 5,000 people. With a global network of more than 30 subsidiaries and more than 10 production plants, supported by around 570 sales and service partners, the company is close to customers around the world. KraussMaffei has been headquartered in Munich since 1838.

For more information: www.kraussmaffeigroup.com

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