INJECTION MOLDING MACHINES AND AUTOMATION.

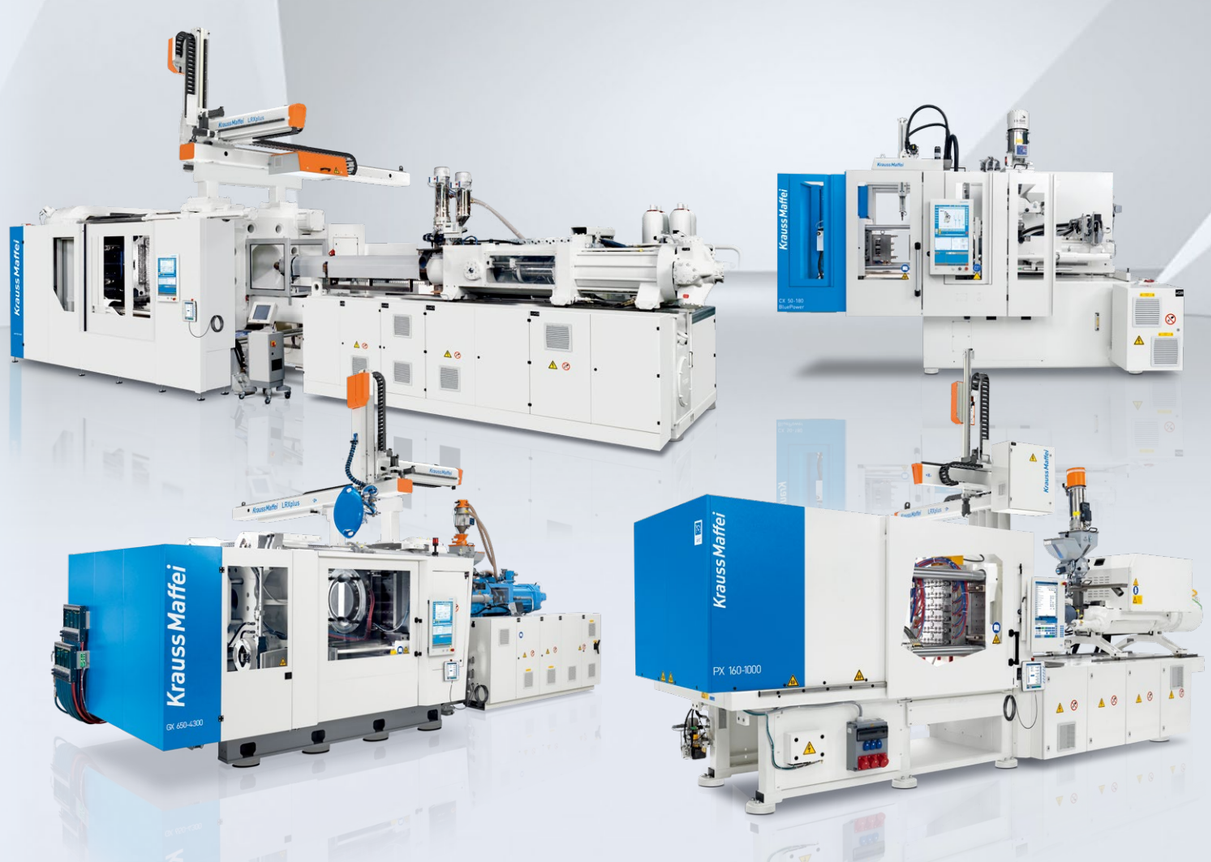
ALWAYS THE RIGHT TECHNOLOGY
FOR YOUR APPLICATION.

krauss maffei.com/en

INJECTION MOLDING MACHINES AND AUTOMATION

ALWAYS THE RIGHT TECHNOLOGY
FOR YOUR APPLICATION.

KraussMaffei
Pioneering Plastics



OUR EXPERTISE – **YOUR BENEFITS**

Satisfied customers around the world trust in KraussMaffei injection molding solutions. Our machines and technologies give you the certainty of having invested in a highly flexible and high-performance solution for your manufacturing project. We stand by you with advice in every phase of your project, from the initial idea all the way to successful series production. Expand your competitive advantage with us at your side!

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KRAUSSMAFFEI **PIONEERING PLASTICS** *PAGE 34-35*

AT HOME IN **YOUR INDUSTRY**

Your priorities are our priorities. As pioneers of injection molding technology, we have stood by our customers from every branch of industry for decades. Our wide-ranging expertise gives us an advantage that we want to pass on to you. Expect injection molding technology at the very highest level—fully customized to the current needs and future topics of your industry. To stay in the leading position going forward, KraussMaffei invests continuously in developing new machine technologies and application processes—true to our slogan: Pioneering Plastics.



Automotive industry

The use of high-end plastic components in vehicle manufacturing is virtually unlimited—whether advanced components for the car body, reducing the component weight or smart surfaces in the interior. From development to cost-effective high-performance series production, we are the right partner to be at your side.



Consumer goods

Advanced design, high function, cost-cutting efficiency—plastics provide their benefits in everyday applications. As an experienced turnkey supplier, we offer you fully automated machines and systems for your individualized requirements in production.



Electrical and electronics

Whether for connectors with metal inlays, handles for power tools or smart surfaces in consumer electronics – we offer you customized system solutions composed of injection molding technology and automation that enable you to implement your production with high quantities at low article costs.



Medical technology

KraussMaffei has decades of experience in developing high-performance and precision injection molding solutions in the medical technology and pharmaceutical industry. Together with leading partners, we develop customized system solutions based on injection molding machines specially configured for medical applications.



Packaging and logistics

Low weight, special shaping for optimized handling and the lowest production costs: crates, pallets and large containers made of plastic provide decisive advantages in logistics. We stand by your side, providing comprehensive advice from the initial idea to series production.



White goods

We can offer you complete production solutions for both small and large household conveniences. It makes no difference whether the product is an electric shaver, vacuum cleaner or washing machine. With our solutions, we set new standards in offering you the surface finish and functional integration you need.

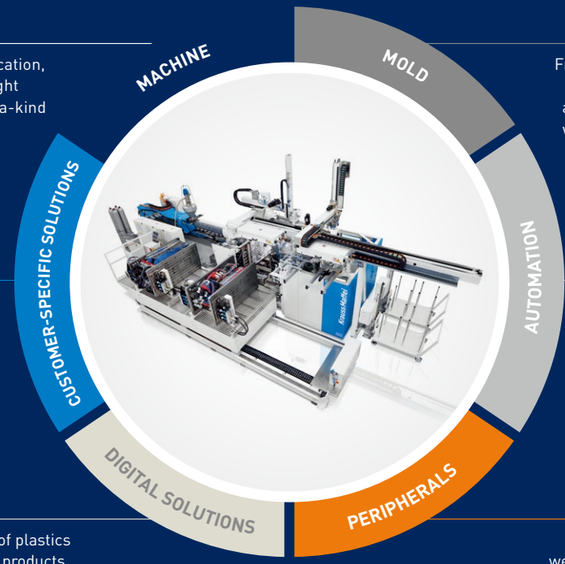


YOUR BENEFITS:

- Highly skilled project consultation
- Network of leading system partners
- High-performance and reliable machine technology
- High service availability worldwide
- Leading digital solutions

EVERYTHING FROM **A SINGLE SOURCE**

KraussMaffei always provides you with a tried-and-tested complete solution with attention to detail. We offer many proprietary components, have an excellent network of leading peripheral and system partners and offer a comprehensive range of services around the world. This is what makes us a reliable partner for your successful injection molding production.



Customized for your application, we provide you with the right machine from our one-of-a-kind portfolio

From a small pipette tip to the dashboard of a vehicle: in all areas of application, we work with the leading moldmakers

In injection molding production, customized requirements are on the everyday agenda. At KraussMaffei, you will receive a solution that is customized for your specific application

From the combined portfolio of KraussMaffei Automation and leading system partners, you always receive the optimal solution for your application

We are shaping the future of plastics processing with our digital products and creating significant economic and environmental added value for you – all packaged in innovative product families that are perfectly tailored to your needs.

In all areas of peripherals, we draw from a global network of market-leading partners

YOUR APPLICATION
OUR MACHINE TECHNOLOGY

Our customers come from a wide variety of industries and no two applications are alike. Each application has its own requirements for the technology. With our one-of-a-kind injection molding portfolio, KraussMaffei offers the entire range you need to successfully implement all industrial applications.



Automotive industry



Electrical and electronics



Medical technology



Consumer goods



Packaging and logistics



White goods

THE RIGHT TECHNOLOGY FOR ANY APPLICATION FROM A ONE-OF-A-KIND PORTFOLIO

Our portfolio includes machine series with various properties. The following table shows which is right for your industry and application.

	PX 500 - 4,000 kN	CX 500 - 4,200 kN	GX 4,000 - 14,500 kN	MX 16,000 - 60,000 kN	PA 500 - 4,500 kN	GA 6,500 - 24,000 kN
Automotive industry	●	●	●	●	●	●
Infrastructure & construction solutions	●	●	●	●	●	●
Medical technology	●	●			●	
White goods	●	●	●	●	●	●
Consumer goods	●	●	●	●	●	●
Packaging & logistics	●	●	●	●	●	●
Electrical systems & electronics	●	●	●		●	●
Optical solutions	●	●	●	●	●	●
Hydraulic		●	●	●		●
Electrical	●				●	

PX
500 – 4,000 kN

ALL-ELECTRIC INJECTION MOLDING MACHINE: POWER MEETS FLEXIBILITY

The PX series is the answer to your requests for more flexibility while increasing productivity. You can assemble your PX precisely to your production requirements from a wide selection of components according to the modular principle.

FLEXIBLE

- High degree of modular design thanks to a modular principle for clamping unit and injection unit combinations
- Many options for greater performance and functions

PRODUCTIVE

- User-friendly ergonomics and accessibility
- Enlarged mold fixing platens for molds with many cavities

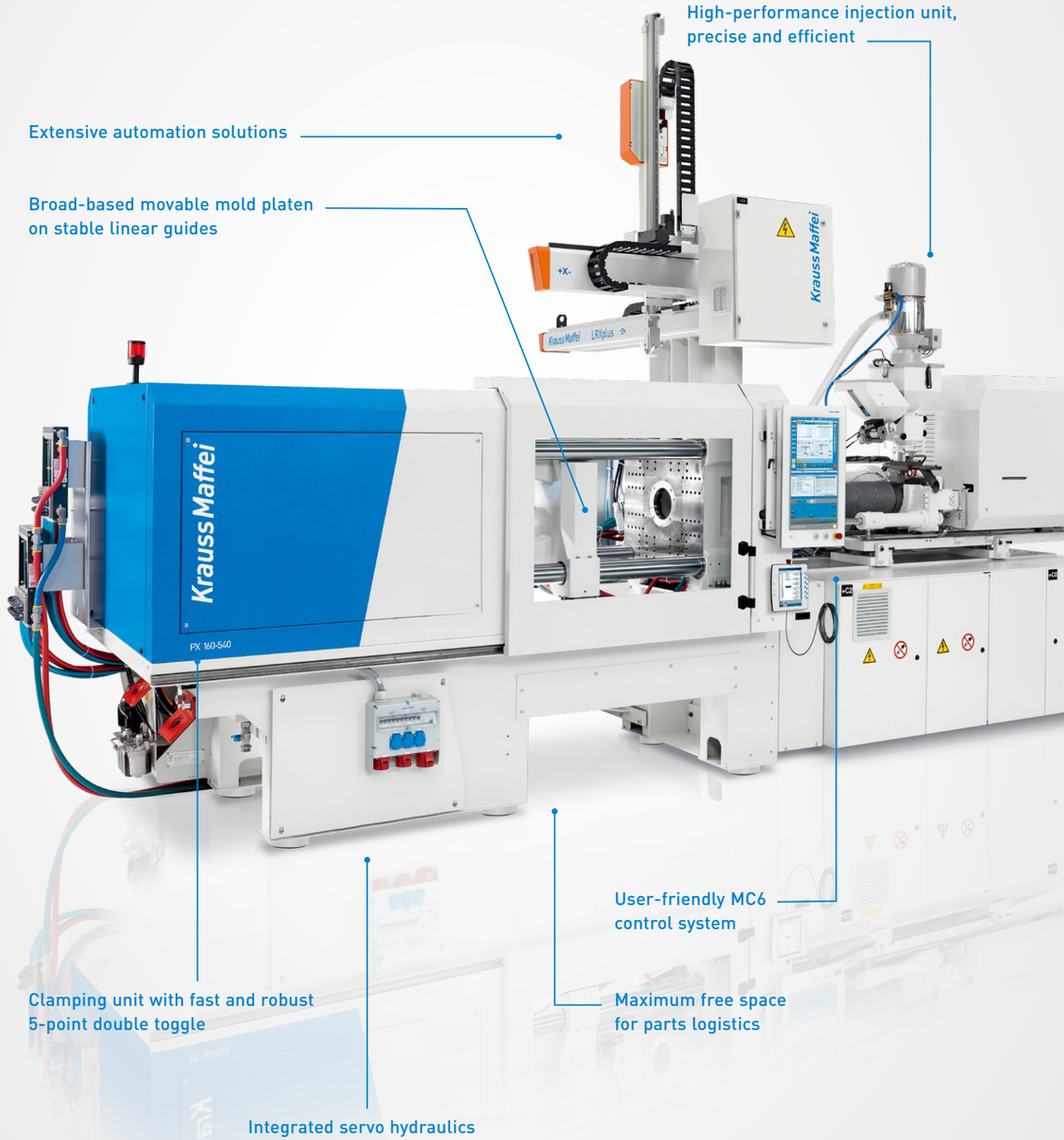
EFFICIENT

- Easy mold change and fast startup
- Options for an expanded range of applications
- Always up-to-date with service products

Process Control by APCplus

Optional:
APCplus (Adaptive Process Control) for optimal shot weight consistency and process stability

Modular design:
Clamping unit, injection unit and drives can be combined individually



NEW PX
800 – 2,000 kN

ALL-ELECTRIC INJECTION MOLDING MACHINE: PERFORMANCE MEETS SUSTAINABILITY

The new all-electric PX generation is the cutting-edge solution for sustainable, compact and productive injection molding. The expanded modular principle allows you to order a PX unit that is precisely tailored to your manufacturing requirements.

COMPACT

- Efficient housing concept for optimal arrangement of options
- Reduces the footprint by up to 20%

PRODUCTIVE

- Large plate dimensions offer flexibility for heavy and large-volume molds
- Precision linear guides, exposed tie bars and stable supports ensure higher machine performance
- State-of-the-art drive assemblies and electric main axes with ejectors increase productivity over the long term

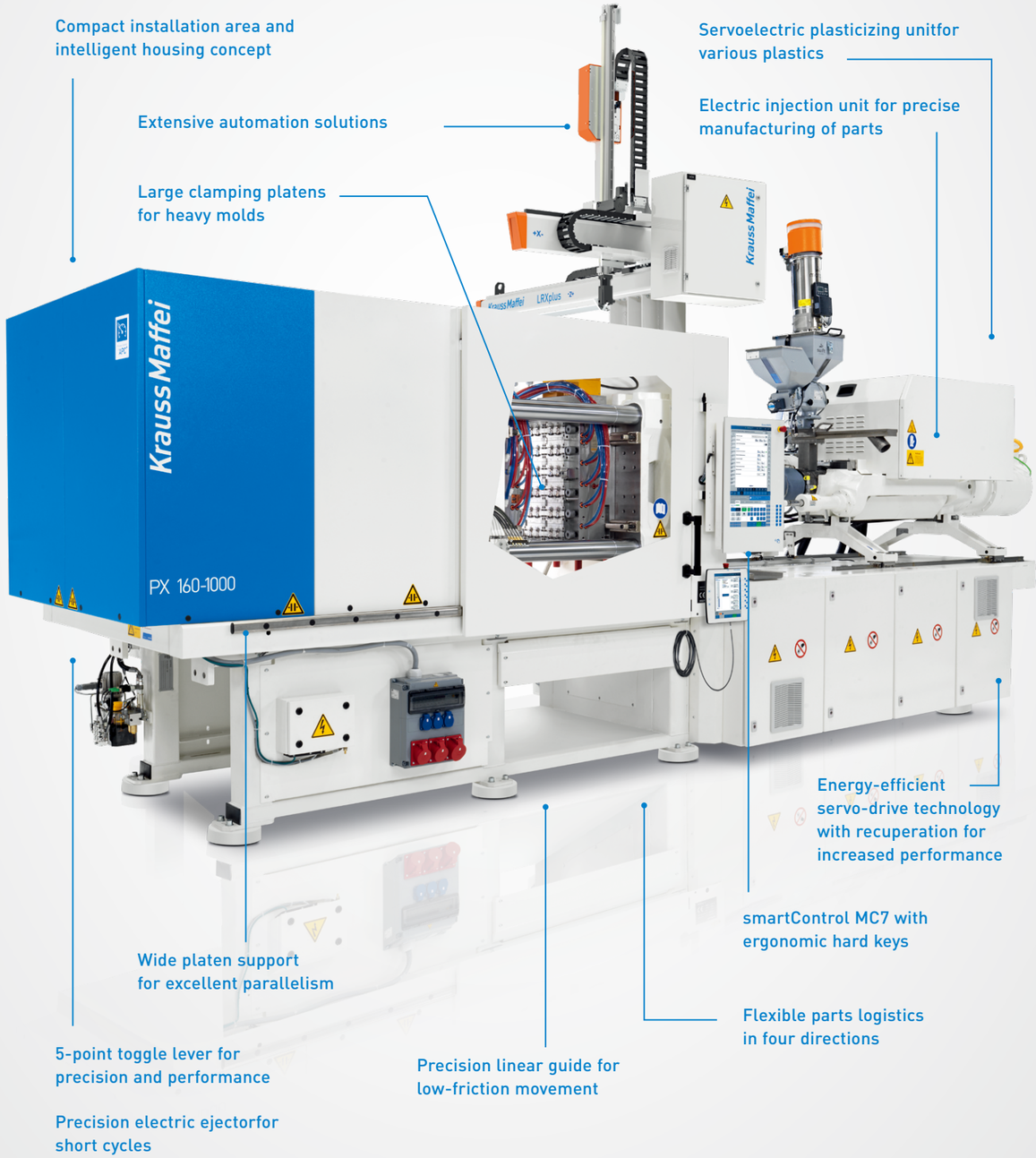
SUSTAINABLE

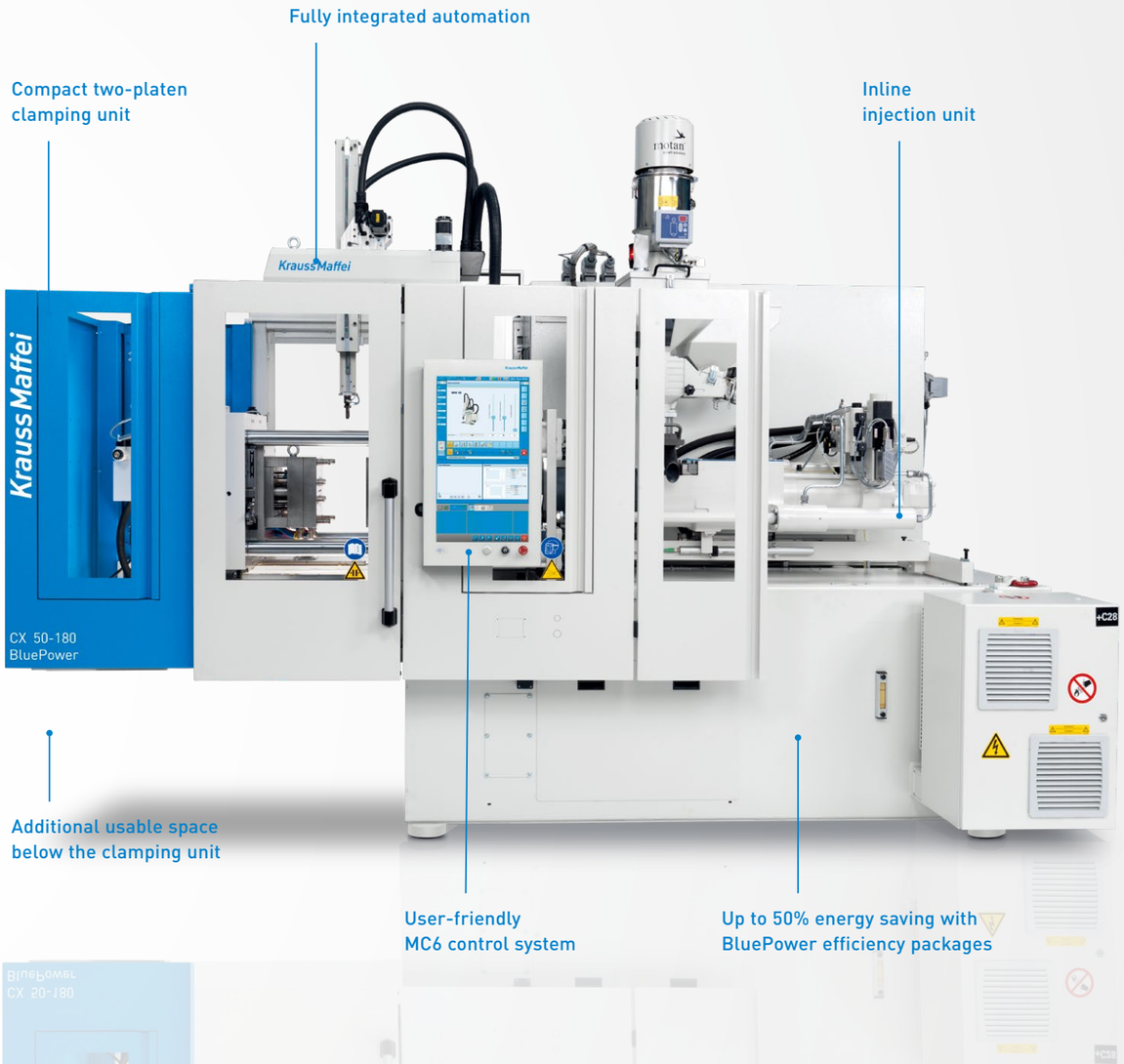
- Linear guides with minimal friction ensure maximum energy efficiency during operation
- Recuperative drive assemblies enable additional energy savings
- Fully accessible machine areas make for easier operation and maintenance

Process Control by APCplus

Optional:
APCplus (Adaptive Process Control) for optimal shot weight consistency and process stability

Modular design:
Clamping unit, injection unit and drives can be combined individually





CX
500 – 4,200 kN

FLEXIBLE GENERALIST WITH COMPACT DESIGN

Each machine can be configured individually: In the fully hydraulic CX series, KraussMaffei offers outstandingly compact, efficient and flexible technology and provides the basis for expansion with all available special processes.

COMPACT

- Compact two-platen clamping unit (cantilevered to 1,600 kN)
- Ample floor space for peripheral devices

EFFICIENT

- Intelligent energy management and BluePower efficiency packages
- New drive concept and clamping system hydraulics

FLEXIBLE

- Modular design
- A high-performance base for additional technologies

Process Control by APCplus

Optional:
APCplus (Adaptive Process Control) for optimal shot weight consistency and process stability

Modular design:
Clamping unit, injection unit and drives can be combined individually

GX
4,000 – 14,500 kN

THE NEW DIMENSION OF INJECTION MOLDING

The GX series combines the first-class, hydromechanical two-platen design with single-piston injection system. The modular structure enables the compact two-platen clamping unit to be configured individually with all available injection units.

POWERFUL

- An extremely short dry cycle time
- High precision with maximum dynamic performance
- Low energy consumption

EASY TO USE

- Excellent accessibility
- Fast mold set-up
- Intelligent and user-friendly control system

VALUE STABLE

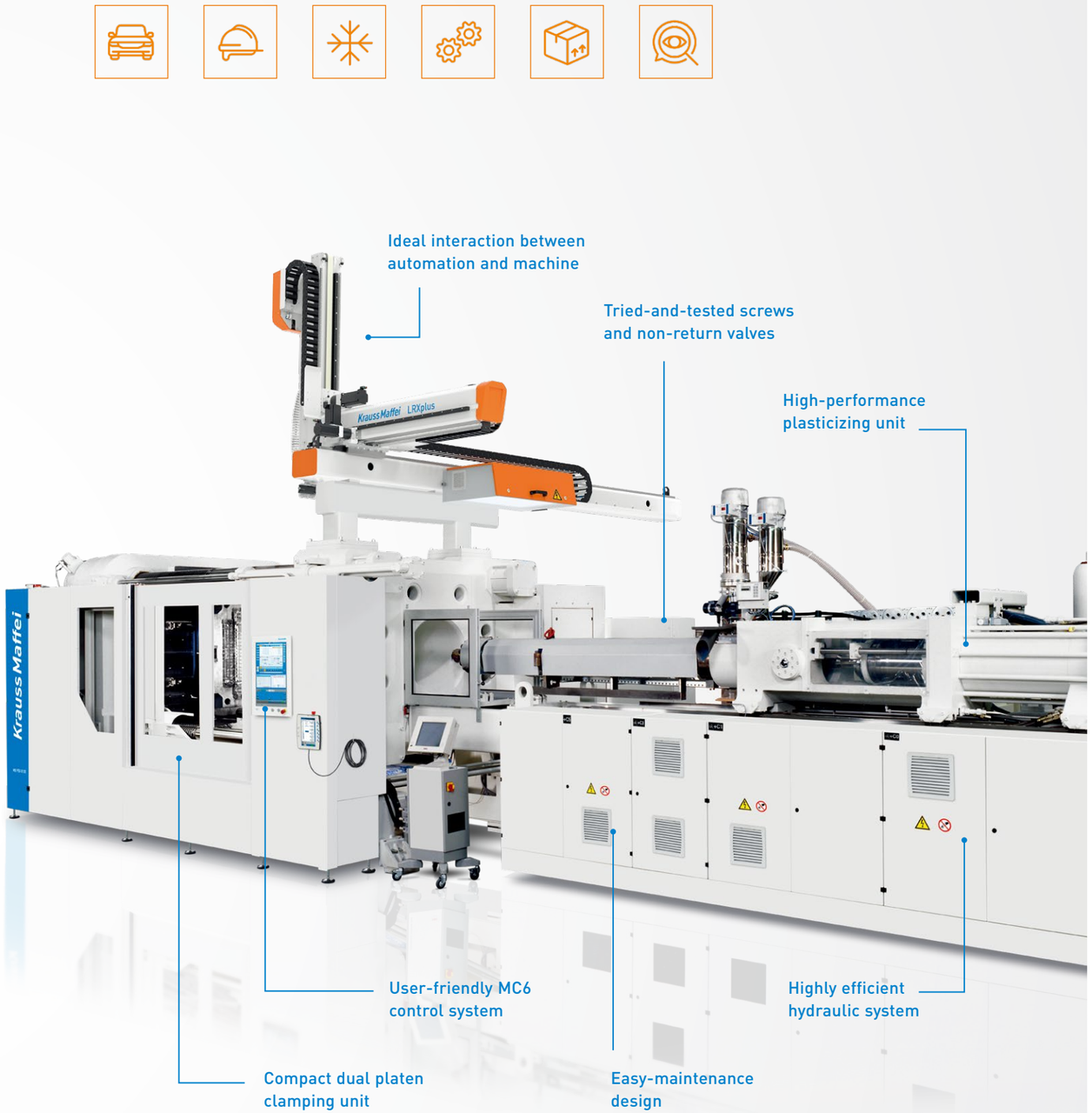
- A robust clamping and injection unit
- Low maintenance effort and expense
- Simple retrofitting

Process Control by APCplus

Optional:
APCplus (Adaptive Process Control) for optimal shot weight consistency and process stability

Modular design:
Clamping unit, injection unit and drive can be combined individually





MX
16,000 – 60,000 kN

HIGH-PERFORMANCE, VERSATILE AND DURABLE INJECTION MOLDING MACHINE

KraussMaffei is the market leader in large-scale injection molding machines. Our MX series is recognized around the world and is principally characterized by the hydromechanical two-platen clamping unit, which we developed ourselves. The product range spans from compact injection molding units with basic automation and highly complex manufacturing cells, through to complete factory planning.

POWERFUL

- Maximum speed combined with maximum precision
- Outstanding melt quality and excellent shot weight consistency
- High level of part quality

VERSATILE

- Customer-specific solutions
- A wide range of technologies
- Intelligent and user-friendly control system

DURABLE

- Construction and components optimized according to load case
- Low maintenance expenses and simple retrofitting
- Intelligent pairing of premium-quality materials

Process Control by APCplus

Optional:
APCplus (Adaptive Process Control) for optimal shot weight consistency and process stability

Modular design:
Clamping unit, injection unit and drive can be combined individually

PA
500 – 4,500 kN

THE PERFECT ENTRY POINT TO THE WORLD OF ALL-ELECTRIC INJECTION MOLDING

PA expands the injection molding portfolio with a series featuring standardized options for cost-effective production of simple plastic components. The basic injection molding machine from KraussMaffei, PA, is the perfect entry-level solution for all-electric injection molding that allows quick, innovative responses to market requirements. It combines high performance, simple operation and short delivery times. It can be used in a wide variety of areas of application for example in the packaging industry, electrical and electronics industry, medical technology and automotive industry.

EFFICIENT

- High-precision injection molding processes with excellent repeatability
- Proven high-end plasticizing units
- Short drying cycle times and parallel axis movement
- High energy efficiency thanks to the all-electric machine concept

EASY TO OPERATE

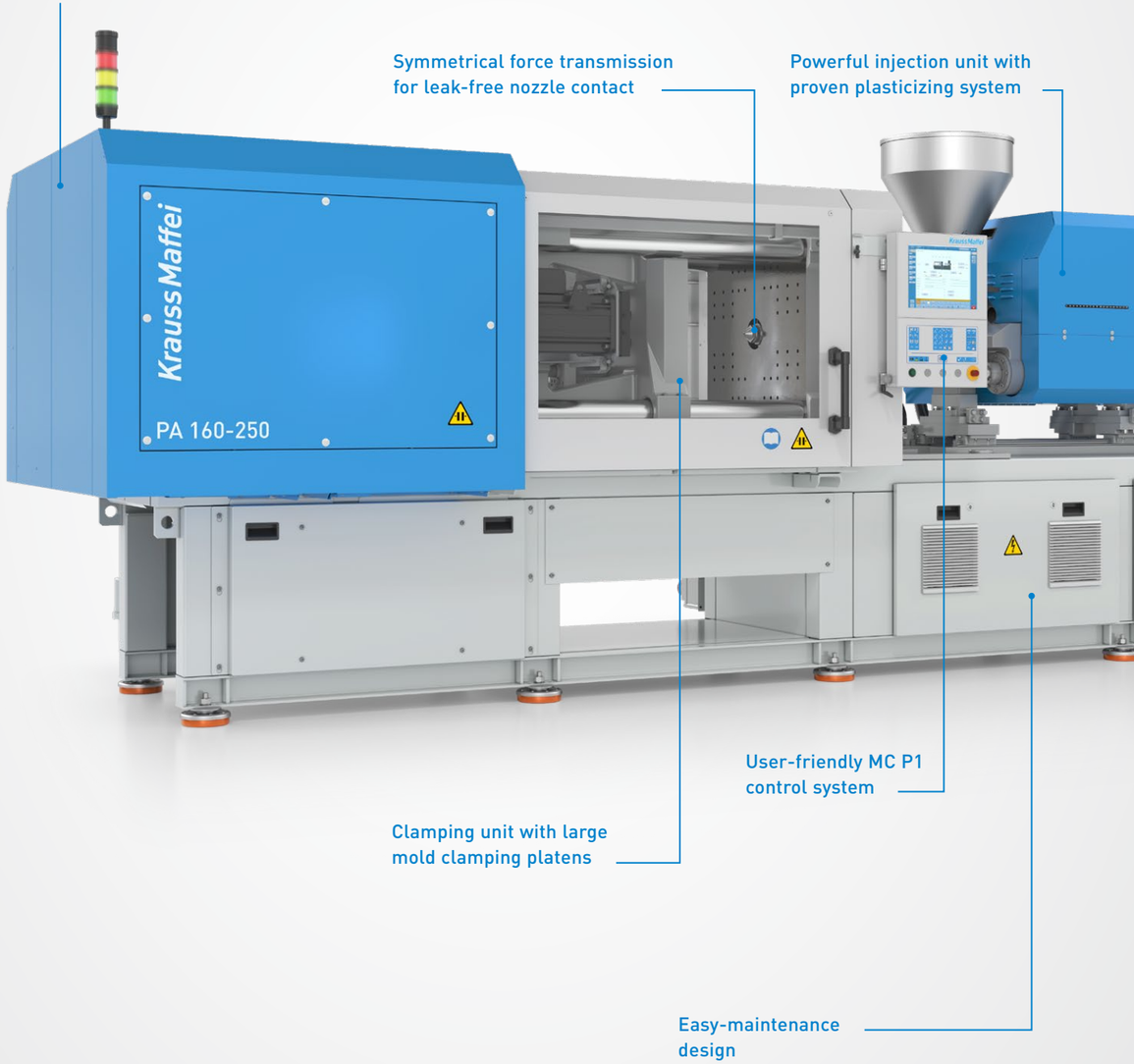
- User-friendly MC P1 control system
- Easy integration of automation solutions
- Features interfaces for higher-level control systems

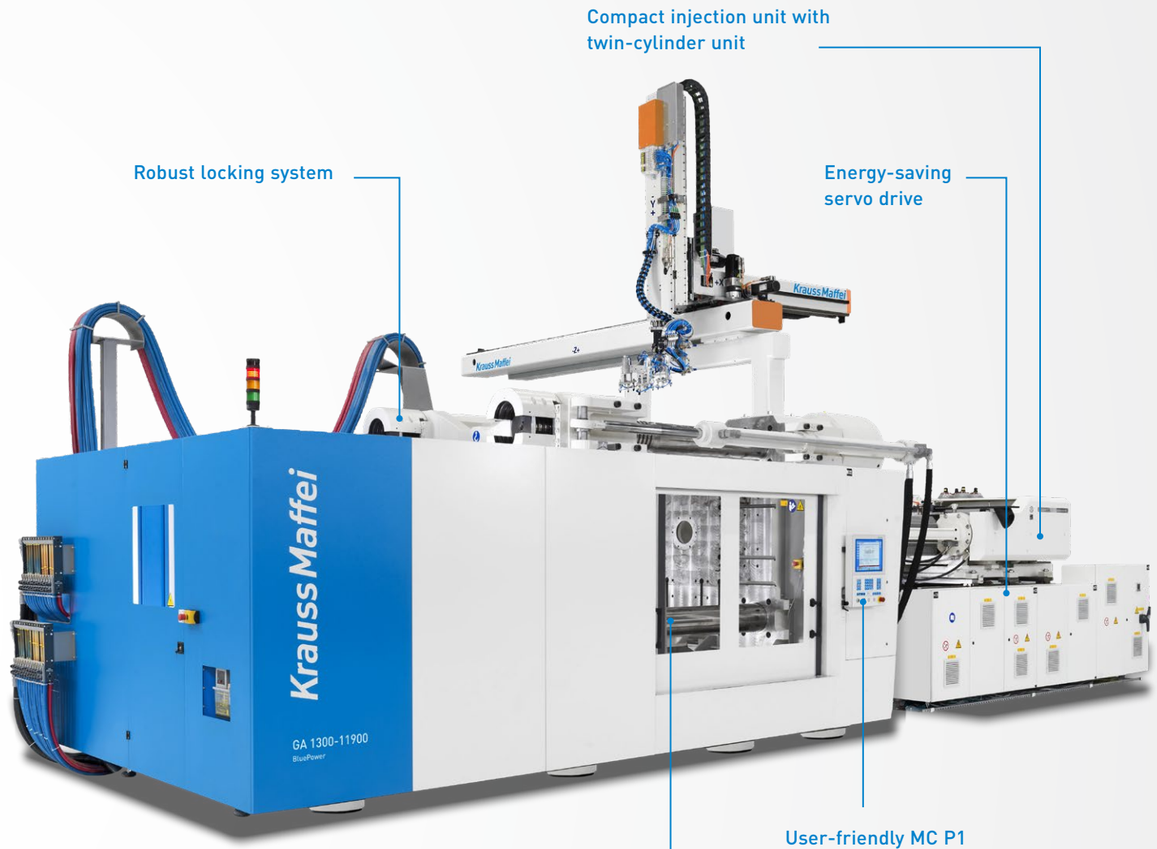
COST EFFICIENCY

- Optimized price-performance ratio for a broad range of applications
- Short lead times thanks to modular machine concept with wide range of options
- Proven KraussMaffei quality for reliable part production

Process Control by APCplus

Optional:
APCplus (Adaptive Process Control) for optimal shot weight consistency and process stability





GA
6,500– 24,000 kN

POWER MEETS LIGHTNESS

GA expands the injection molding portfolio with a series featuring standardized options for cost-effective production of simple plastic components. The GA hydromechanical two-platen injection molding machine represents a high degree of quality in conjunction with easy operation and fast availability.

Through the easy integration of automation solutions and the global service network of KraussMaffei, we offer you the best possible support for increasing your efficiency and competitiveness even more.

SIMPLE

- Affordable price
- Fast availability
- Easy to operate

RELIABLE

- High precision and repeatability
- Proven and robust machine design
- Global support from the KraussMaffei Service team

FLEXIBLE FOR AUTOMATION

- Easy-to-connect linear and industrial robots
- Digital data exchange and tracking
- Pick & place with LRXplus

Process Control by APCplus

Optional:
APCplus (Adaptive Process Control) for optimal shot weight consistency and process stability

Modular design:
Clamping unit and injection unit can be combined individually

INJECTION MOLDING MACHINES PORTFOLIO
OVERVIEW









		PX	New PX	CX	GX	MX	PA	GA
Clamping force	kN	500-4,000	800-2,000	500-4,200	4,000-14,500	16,000-60,000	500-4,500	6,500-24,000
Machine design		Toggle lever	Toggle lever	2-platen	2-platen	2-platen	Toggle lever	2-platen
Plasticizing	Hydraulic	—	—	●	●	●	—	●
	Electrical	●	●	○	○	○	●	○
Injection	Hydraulic	—	—	●	●	●	—	●
	Electrical	●	●	—	—	—	●	—
Nozzle contact	Hydraulic	●	●	●	●	●	—	●
	Electrical	—	—	—	—	—	●	—
Nozzle shut-off	Pneumatic	○	○	○	○	—	○	○
	Hydraulic	○	—	○	○	○	—	○
Clamping unit movement	Hydraulic	—	—	●	●	●	—	●
	Electrical	●	●	—	—	—	●	—
Ejector	Hydraulic	●	—	●	●	●	—	●
	Electrical	○	●	—	—	—	●	—
Core-pulling	Pneumatic	○	○	○	○	○	○	○
	Hydraulic	○	○	○	○	○	○	○
	Electrical	○	○	○	○	○	○	○
Cascade	Pneumatic	○	○	○	○	○	○	○
	Hydraulic	○	○	○	○	○	○	○
	Electrical	○	○	○	○	○	○	○

● Standard
○ Optional
— Not applicable

PRODUCTIVITY BOOST
FOR YOUR PRODUCTION

Automation is becoming ever more important as a decisive success factor in production. From the combined portfolio of KraussMaffei Automation leading system partners, you always receive the optimal solution for your production.



SPX10 sprue picker
Fast. Precise. Economical.

- The telescoping stroke makes the SPX10 ideally suited for use in low buildings
- With programming wizard and integration into the MC6 control system, these sprue pickers are one of the most compact solutions on the market



LRXplus linear robot
Compatible. Simple. Always.

- Reliable with flexibility for expansion
- Works with both KraussMaffei machines and other manufacturers' machines
- Particularly intuitive control system—ideal for beginners and personnel with less training



Industrial robot IR
Endless. Flexible. Outstanding.

- Freely programmable movement sequences for large swiveling ranges
- In-house design of various gripper concepts for the most challenging applications
- Intuitive control concept for adapting to individual kinematic units



System solutions
Customized. Turnkey. Ingenious.

The one-stop shop for a wide variety of production requirements
- Extensive portfolio of peripheral devices
- Integration of customer-provided materials
- Scalable control concepts
- Highly productive modular solutions with integration of various technologies such as insertion technologies, IML and FiberForm

PROCESSING TECHNOLOGIES – **AS DIVERSE AS YOUR REQUIREMENTS**

Many products cannot be manufactured with standard injection molding technology. Thanks to our longtime experience and exceptional application understanding, our technology portfolio offers the right solution for your task.

CELLFORM
FOAM TECHNOLOGIES

FIBERFORM
THERMOPLASTIC LIGHT-WEIGHT CONSTRUCTION

MULTINJECT
MULTI-COMPONENTS

CLEANFORM
CLEANROOM TECHNOLOGY

DCIM
DIRECT COMPOUNDING INJECTION MOLDING

GIT / WIT
GAS AND WATER INJECTION TECHNOLOGY

COLORFORM
PAINTING IN THE MOLD

IMC
INJECTION MOLDING COMPOUNDING

POLYSET & DUROSET
DUROMER PROCESSING

COINJECTION
BARRIER

IMD
IN-MOLD DECORATION

SILCOSET
SILICONE PROCESSING

DECOFORM
OVER-MOLDING OF DECORATIONS & TEXTILES

IML
IN-MOLD LABELING PACKAGING

SPINFORM
SWIVEL PLATEN TECHNOLOGY

DMH
DYNAMIC MOLD HEAT-BALANCING

INSERTFORM
INLAY METHODS

STAMPFORM / ICM
INJECTION COMPRESSION MOLDING TECHNOLOGIES

CFP
CHOPPED FIBER PROCESSING



Digital portfolio

AN OVERVIEW OF THE PRODUCT FAMILIES

socialProduction

The socialProduction product family facilitates the intuitive monitoring of injection molding machines, the production process and the condition of machine components and combines KraussMaffei's extensive expertise in plastics with forward-looking IT expertise.

- liveCare
- productionMonitor
- processSupport

smartControl

With its smartControl product family, KraussMaffei offers solutions that help our customers overcome a variety of challenges in the production process. The products are an integral part of the MC6/MC7 control system and create added value throughout the entire value-creation cycle. From process setup assistance functions and production support tools to process analysis, smartControl includes a wide variety of innovative functions.

- barrelAssistant
- weeklyTimer
- startupAssistant
- ecoAssistant
- Dwell time & torque monitoring

smartMachine

The smartMachine product family includes innovative digital products and assistance systems that ensure increased process stability, reproducible quality and significantly fewer rejects. Our solutions let users determine optimal production parameters and offer unique insights into the injection molding and reaction processes.

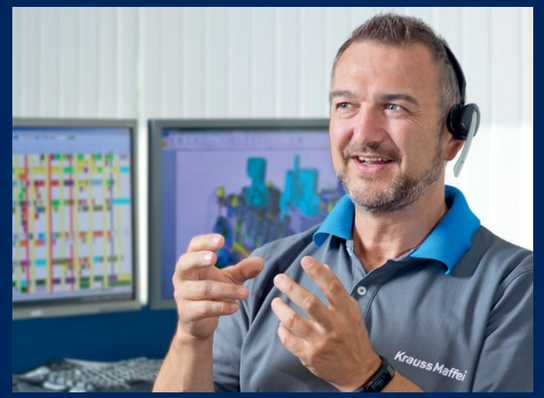
- APCplus
- dataXplorer
- smartOperation

smartConnect

The smartConnect product family offers connectivity and remote support solutions for the injection molding area and supports the digital transformation. It enables the collection of machine data and the networking of machines, and forms the basis for digital services.

- smartCube
- smartLink
- remoteAccess





OUR WORLDWIDE EXPERTISE IS YOUR ADVANTAGE
DIGITAL & SERVICE SOLUTIONS

With your KraussMaffei machine, you have chosen a product that delivers the highest levels of productivity and reliability. In addition to our range of machinery, KraussMaffei focuses on comprehensive and future-oriented solutions, innovative business models and an innovative portfolio of digital products.

Customer service at the touch of a button

The process of digital transformation is becoming faster and easier than ever for the customer. Our Digital & Service Solutions unit makes your production chain even more flexible and efficient with future-oriented solutions. KraussMaffei thus globally provides an all-inclusive customer service package and networks machines and processes with each other. Our global support offers a sound basis for your local long-term success.

Individual challenges in mechanical engineering call for intelligent solutions

With our services portfolio, we support you throughout your machine's lifecycle with a strong focus on your specific needs. In order to satisfy your wishes, we offer you a wide range of solutions in order to ensure maximum availability and optimum productivity of your machines.

Technology[3] as a unique selling proposition

KraussMaffei is the only supplier in the world with a product range comprising the most important machine technologies for plastic and rubber processing: injection molding machinery, automation, reaction process machinery and extrusion technology. KraussMaffei is represented worldwide with more than 30 subsidiaries and over 10 production plants as well as about 570 commercial and service partners. Working together with our customers and partners, we are thus in a position to offer vast and unique expertise in the industry.

You can find further information at:
www.kraussmaffei.com

KRAUSSMAFFEI – PIONEERING PLASTICS

Extensive expertise from a single supplier

KraussMaffei is one of the world's leading manufacturers of machinery and systems for producing and processing plastics and rubber. Our brand has been synonymous with cutting-edge technology for over 180 years. Our product range includes all technologies in injection molding, extrusion and reaction process machinery. KraussMaffei has a unique selling proposition in the industry as a result. By drawing on our proven innovative capacity, we can guarantee our customers sustained additional value over their entire value-adding chain through our standardized and individual product, process, digital and service solutions. The range of our products and services allows us to serve customers in many sectors including the automotive, packaging, medical and construction industries. We also supply manufacturers of electrical and electronic products and household appliances.

At your service all over the world

KraussMaffei is represented all over the world. Subsidiaries provide you with support in the countries shown in light blue. Our sales and service partners take care of you in the regions shown in white.

You can find all contact information at
www.kraussmaffei.com/en

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