

KraussMaffei

Pioneering Plastics

INJECTION MOLDING MACHINES

*ALWAYS THE RIGHT TECHNOLOGY
FOR YOUR APPLICATION.*



OUR EXPERTISE – YOUR BENEFITS

Satisfied customers around the world trust in KraussMaffei injection molding systems. 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!

AT HOME IN
YOUR INDUSTRY

PAGE 4-5

EVERYTHING FROM
A SINGLE SOURCE

PAGE 6-7

YOUR APPLICATION
OUR MACHINE TECHNOLOGY

PAGE 8-9

OUR
SERIES

PAGE 10-25

INJECTION MOLDING MACHINES
PORTFOLIO OVERVIEW

PAGE 26-27

PRODUCTIVITY BOOST
FOR YOUR MANUFACTURING
AUTOMATION SOLUTIONS

PAGE 28-29

PROCESSING
TECHNOLOGIES

PAGE 30-31

DIGITAL &
SERVICE SOLUTIONS

PAGE 32-33

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 / lightweight construction

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.



Technical parts / 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.



Thin-walled packaging

We offer smart system solutions for challenging thin-walled and IML applications. Shortest cycle times with simultaneous maximum availability and quality are the key to effectively reducing your unit costs.



Medical technology / pharmaceuticals / healthcare

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.



Logistics / packaging

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.



PET preforms / closures

We offer global users high-performance system solutions for PET preforms and beverage caps that are tailored to individual requirements. In the beverage industry, optimizing unit costs is paramount. We attain this with maximum output, highest availability and uniform part quality.



YOUR BENEFITS:

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

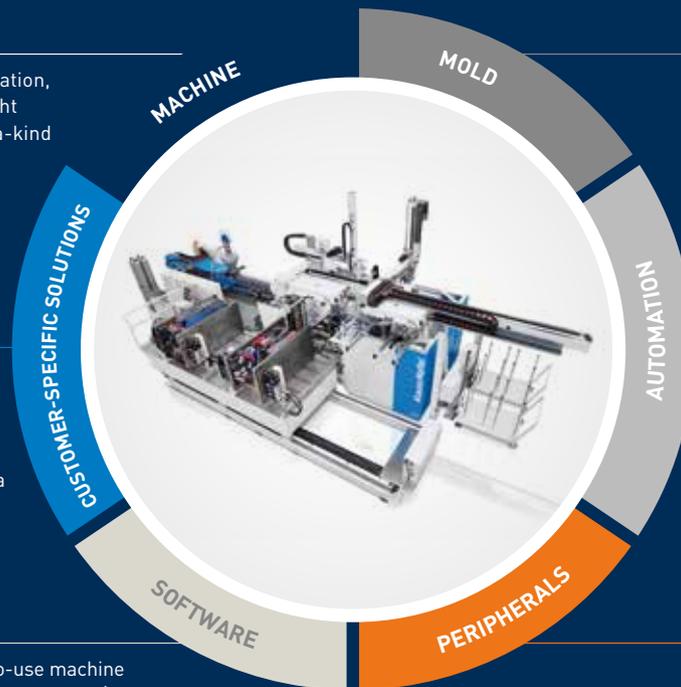
EVERYTHING FROM A SINGLE SOURCE

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

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

With our flexible and easy-to-use machine control systems, the MC6 (KraussMaffei) and aXos (NETSTAL), get the maximum from your application



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

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

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 / lightweight construction



Technical parts / consumer goods



*Medical technology / pharmaceuticals /
healthcare*



Thin-walled packaging



Logistics / packaging



PET preforms / closures

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	CX	GX	MX	NETSTAL ELION	NETSTAL ELIOS	NETSTAL PET-LINE	PETFORM
	Automotive	●	●	●	●				
	Technical parts / consumer goods	●	●	●	●				
	Thin-walled packaging					●	●		
	Logistics / packaging	●		●	●				
	Medical technology / pharmaceuticals / healthcare	●	●			●			
	PET preforms							●	●
	Closures	●	●	●		●	●		

PX

250 – 3,200 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 based on a modular design.

FLEXIBLE

- A wide variety of combinations of clamping units and injection units thanks to divided machine base
- Enlarged mold clamping platen for flexible use of molds of various sizes without increased clamping force
- Large choice from a broad range of screws and nonreturn valves for all processing requirements

PRODUCTIVE

- Perfect platen parallelism even with high mold weights thanks to linear guidance of moving platens
- High reproducibility and repetition accuracy
- Centered nozzle contact force for maximum precision thanks to parallel injection unit barrel
- High-precision and dynamic drive technology

EFFICIENT

- Intelligent energy management through efficient drive system with integrated energy recovery
- High efficiency thanks to low conversion losses
- Low maintenance expenses thanks to ideal accessibility such as ejector, media supply, etc.



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

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



High-performance injection unit,
precise and efficient

Extensive automation solutions

Broad-based, moving mold
clamping platen on stable linear guides

User-friendly MC6
control system

Clamping unit with fast and robust
5-point double toggle

Equipment options up to
cleanroom class ISO 5





Fully integrated automation

Compact two-platen clamping unit

Inline injection unit



User-friendly MC6 control system

Additional storage space below the clamping unit

Screwless cover

Up to 50% energy saving with BluePower efficiency packages

Equipment options up to cleanroom class ISO 5



CX

350 – 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 up to 1,600 kN)
- Ample installation area 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



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

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

A cost-effective **CX ClassiX** special edition
is also available for standard applications

GX

4,000 – 13,000 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 costs
- Simple retrofitting



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

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

A cost-effective **GX ClassiX** special edition
is also available for standard applications



Ideal interaction between automation and machine

Powerful injection unit with proven plasticizing system

Excellent two-platen technology



GearX and GuideX product innovations for fast locking and high part quality

Optimal accessibility for short set-up times and easy maintenance

User-friendly MC6 control system

Performance-adapted drive concepts for all performance levels



Ideal interaction between automation and machine

Tried-and tested screws and non-return valves

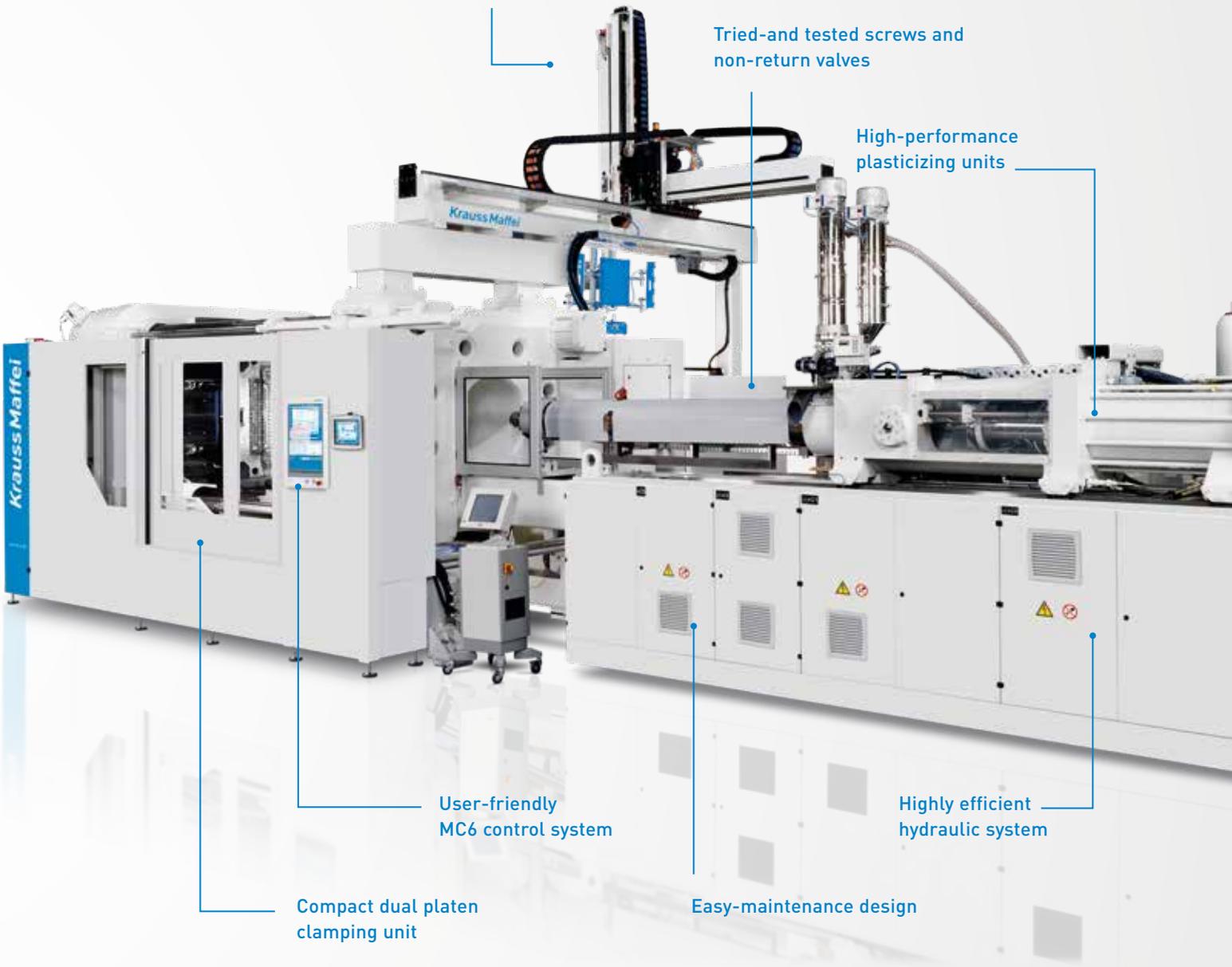
High-performance plasticizing units

User-friendly MC6 control system

Highly efficient hydraulic system

Compact dual platen clamping unit

Easy-maintenance design



MX

10,000 – 55,000 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 hydro-mechanical dual platen clamping unit, which we developed ourselves. The performance spectrum ranges from compact injection molding units with basic automation and highly complex production 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



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

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

A cost-effective **MX ClassiX** special edition is also available for standard application

NETSTAL ELION

800 – 4,200 kN

THE HIGH-PERFORMANCE, HIGH-PRECISION AND EFFICIENT INJECTION MOLDING MACHINE

Fast, precise, reliable, user-friendly and particularly efficient in operation. These are the most important characteristics of our NETSTAL ELION Series. The slogan: "Low energy, high performance." Thanks to a consistent modular design and a large number of additional equipment options, NETSTAL ELION can easily be adapted to meet the needs in different application areas.

FAST

- Electric clamping unit with unique actuation principle for extremely short cycle times
- Electrical and hybrid injection units enable dynamic injection at high speeds

PRECISE

- The centered 5-point toggle distributes the clamping force with outstanding uniformity
- The RFC injection control attains exceptional shot weight consistency and thus uniform part quality

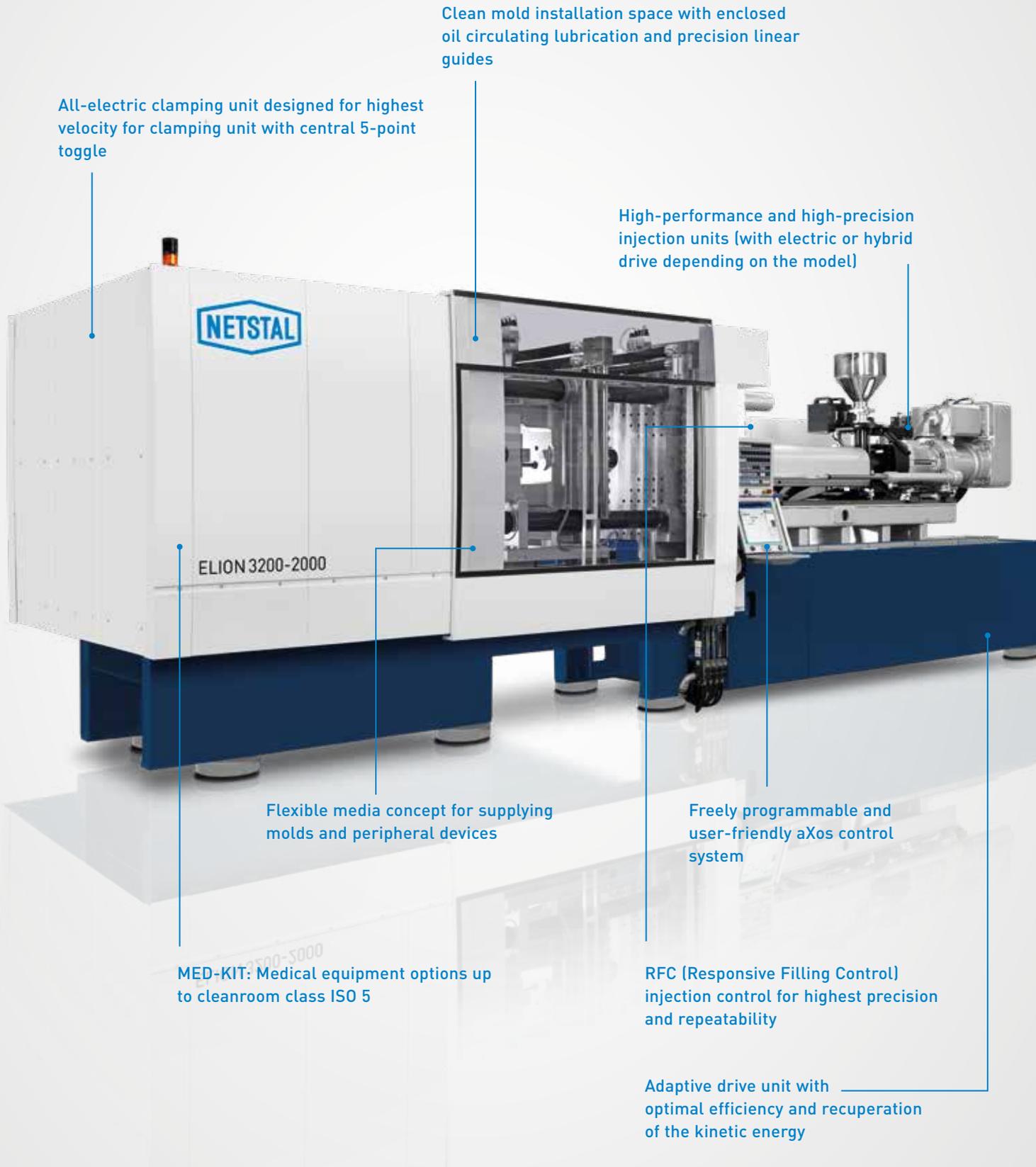
RELIABLE

- All axes are designed for longtime operation under maximum load
- Highest availability based on robust and low-wear design engineering



Optional:
Smart Operation – guided and safe operation in the production environment

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



All-electric clamping unit designed for highest velocity for clamping unit with central 5-point toggle

Clean mold installation space with enclosed oil circulating lubrication and precision linear guides

High-performance and high-precision injection units (with electric or hybrid drive depending on the model)

ELION 3200-2000

Flexible media concept for supplying molds and peripheral devices

Freely programmable and user-friendly aXos control system

MED-KIT: Medical equipment options up to cleanroom class ISO 5

RFC (Responsive Filling Control) injection control for highest precision and repeatability

Adaptive drive unit with optimal efficiency and recuperation of the kinetic energy



Flexible media concept for supplying molds and peripheral devices

Generous installation space for large molds and stack molds

Hybrid injection unit with extremely high injection capacity and high-precision control characteristics

RFC (Responsive Filling Control) injection control for highest precision and repetition accuracy



5-point double toggle with patented hybrid drive technology for highest velocity with maximum clamping force

Clean mold installation space with enclosed lubrication and support of the moving mold plate on stable linear guide

Flexible and user-friendly aXos control system

Adaptive drive unit with optimal efficiency and recuperation of the kinetic energy

NETSTAL ELIOS

4,500 – 7,500 kN

POWERFUL, FAST, HIGH-PRECISION

Our NETSTAL ELIOS high-performance machines enable you to produce perfect thin-walled packaging at the lowest unit costs. Fastest cycle times, dynamic injection and maximum process stability are the key to success.

POWERFUL

- High clamping forces and powerful injection enable the efficient production of state-of-the-art thin-walled packaging
- Patented dual drive concept ensures maximum performance with low energy input

FAST

- Fastest packaging machine on the market
- Maximal output, best quality, lowest unit costs

HIGH-PRECISION

- Stable and overall low-wear design engineering
- Extremely accurate RFC injection control with dynamic control resolution to the millisecond



Optional:
Smart Operation – guided and safe operation in the production environment

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

NETSTAL PET-LINE

2,400 – 5,000 kN

HIGH CAPACITY FOR PREFORM PRODUCTION

The NETSTAL PET-LINE is a state-of-the-art production system for PET preforms and stands for the highest possible cost-effectiveness and efficient production. The NETSTAL PET-LINE product line makes KraussMaffei one of the world's leading providers of injection molding machines for PET preforms.

POWERFUL

- Three platforms with 2400, 4000 and 5000 kN clamping force
- Highest injection capacity and gentle material processing
- Depending on market requirements, produce with up to 144 cavities

COST-EFFECTIVE

- Adaptive drive unit with optimal energy efficiency
- Low unit costs due to excellent overall equipment effectiveness

RELIABLE

- Reliable continuous operation
- In a rough industrial environment with unstable power supply, the KPN option increases the availability of your system



Two-component design for overmolding applications



High-precision digital control engineering for fastest cycle times

Dynamic demolding unit with integrated aftercooling

High-performance 2-level injection units, designed for highest throughput with maximum precision



Fast and robust toggle clamping unit

Adaptive drive unit with optimal energy efficiency

KPN option stops the current cycle in a safe and controlled manner



Turnkey systems – optimally tuned to individual customer needs



Rotatable cooling unit with four stations for shortest cycle times

Dynamic two-platen clamping unit in vertical positioning for space-saving layout

Hybrid injection units with special HPX screws ensure high throughputs with minimum energy input

Compact and energy-efficient gripper unit in lightweight design

Power backup option prevents short shots

PETFORM

1,750 – 3,200 kN

FLEXIBLE AND EFFICIENT MODULE PLATFORM FOR MANUFACTURING PREFORMS

With its vertical clamping unit design and an electric plasticizing unit, the PETFORM is primarily characterized by its high efficiency and excellent availability.

FLEXIBLE

- Two platforms with 1750 and 3200 kN clamping force
- Depending on market requirements, produce with up to 112 cavities

EFFICIENT

- Low power consumption
- Fast and easy mold change

COST-EFFECTIVE

- Short cycles with immediate aftercooling
- Small footprint thanks to vertical clamping unit

INJECTION MOLDING MACHINES PORTFOLIO OVERVIEW



		PX	CX	GX
Clamping force min.	kN	250	350	4,000
Clamping force max.	kN	3,200	4,200	13,000
Machine design		Toggle lever	2-platen	2-platen
Plasticizing	Hydraulic	—	●	●
	Electric	●	○	○
Injection	Hydraulic	—	●	●
	Electric	●	—	—
Nozzle contact	Hydraulic	●	●	●
	Electric	—	—	—
Nozzle shut-off	Pneumatic	○	○	○
	Hydraulic	○	○	○
Clamping unit movement	Hydraulic	—	●	●
	Electric	●	—	—
Ejector	Hydraulic	●	●	●
	Electric	○	—	—
Core-pulling	Pneumatic	○	○	○
	Hydraulic	○	○	○
	Electric	○	○	○
Cascade	Pneumatic	○	○	○
	Hydraulic	○	○	○
	Electric	○	○	○

- Standard
- Optional
- Not applicable



MX

10,000

55,000

2-platen



NETSTAL ELION

800

4,200

Toggle lever



NETSTAL ELIOS

4,500

7,500

Toggle lever



NETSTAL PET-LINE

2,400

5,000

Toggle lever



PETFORM

1,750

3,200

2-platen

●	—	—	—	—
○	●	●	●	●
●	○	●	●	●
—	○	—	—	—
●	●	●	●	●
—	●	—	—	—
—	○	○	—	—
○	—	—	●	●
●	—	●	●	●
—	●	●	—	—
●	○	●	●	●
—	○	—	—	—
○	○	○	—	—
○	○	○	○	—
○	○	○	—	—
○	○	○	—	—
○	○	○	—	—
○	○	○	—	—



PRODUCTIVITY BOOST FOR YOUR MANUFACTURING

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



LRX linear robot

Productive. Intuitive. Cost-effective.

- Reliable with flexibility for expansion
- Works with both KraussMaffei machines and other manufacturers' machines
- **NEW:** 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 solution

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 complete integration for standard solutions PET, IML and others

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
LIGHTWEIGHT CONSTRUCTION

MULTINJECT
MULTI-COMPONENTS

CLEANFORM
CLEANROOM TECHNOLOGY

GIT / WIT
GAS AND WATER
INJECTION TECHNOLOGY

OVERMOLDING
TWO-LAYERED PET
PREFORMS

COLORFORM
PAINTING IN THE MOLD

IMC
INJECTION MOLDING
COMPOUNDING

POLYSET & DUROSET
DUROMER PROCESSING

COINJECTION
BARRIER

IMD & IML
IN-MOLD DECORATION /
IN-MOLD LABELING

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





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.

Technology³ 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

ALWAYS THE RIGHT TECHNOLOGY
FOR YOUR APPLICATION
INJECTION MOLDING MACHINES



kraussmaffe.com