

Powerful. Versatile. Durable. Machines in the MX Series

Engineering Passion

Krauss Maffei

Powerful. Versatile. Durable. Machines in the MX Series

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 through to highly complex production cells and complete factory planning.

With the MX, you can increase your process quality and your production efficiency. Take advantage of our well-founded expertise, individually customized solutions and a professional, global service team.

The highlights of the MX Series at a glance:

Powerful thanks to:

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

Versatile thanks to:

- Customer-specific solutions
- Platform for wide technology spectrum
- Intelligent, user-friendly control system

Durable thanks to:

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

Impressive tour around the MX injection molding machine



Innovative locking system

Maximum speed combined
with maximum precision

Maximum modularity

Customer-specific solutions

Krauss Maffei

Compact dual platen clamping unit

Absolute platen parallelism for low
mold wear and first-class part quality

MC6 control system

Simple and clear operation
with SplitScreen, ProcessDesigner
and Eco function



Ideal interaction between automation and machine

Proven, cost-effective overall concept



Tried-and tested screws and non-return valves

Outstanding melt quality

High-performance plasticization

Excellent shot weight consistency



Easy-maintenance design

Fast and easy preventive maintenance



Highly efficient hydraulic system

Energy-saving operation combined with high level of dynamism

Compact dual platen clamping unit

Robust in design, fast in production and low-maintenance in operation

The MX Series from KraussMaffei is your solution for demanding tasks. Its hydro-mechanical dual platen clamping unit is characterized by maximum reliability and flexibility. Force flow-optimized sliding shoes in combination with guided tiebars guarantee exactly parallel clamping movements and permanent mold protection. The intelligent locking concept ensures extremely short locking times.

Absolute platen parallelism thanks to innovative clamping technology

Force flow-optimized sliding shoes reliably support the moving mold fixing platen as it travels on the machine bed. The sliding shoes are guided horizontally at the side. Even for very heavy molds and maximum opening widths, exact platen parallelism is guaranteed at all times. In addition, the tiebars are permanently guided via guide bushings. The dynamic movement is produced by two movement cylinders which are arranged diagonally and positioned on the outside.

Very short locking times – bringing innovation, even down to the smallest detail

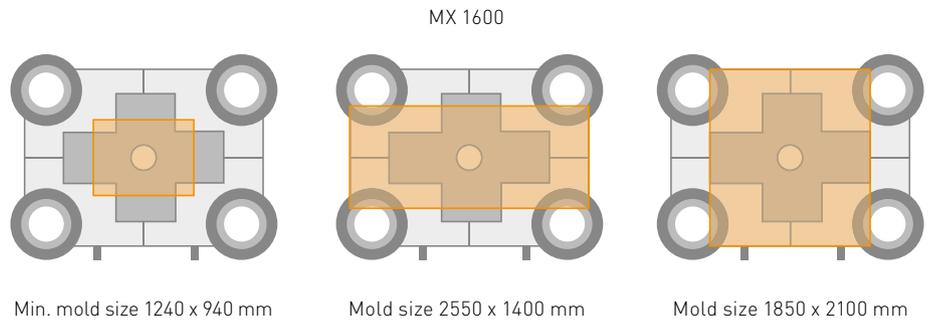
The hydro-mechanical fourfold locking on the tiebars is carried out by saw-tooth shaped elements behind the moving platen which mesh together. It is designed for very short locking times combined with precise positioning. The even application of force through progressive tooth flank play and the friction-optimized material combination of brass and steel together ensure maximum service life.

Building up clamping force quickly and reliably

The special pressure pads of the MX Series allow clamping force to be built up very quickly, and the pads always position exactly. The clamping force is built up at precisely the same time on all four tiebars.

Your advantages:

- Clamping concept which works with speed and precision
- Space-saving design
- Reduced servicing effort
- Increased mold service life
- Ideal for high mold weights



The solid mold fixing platens ensure outstanding rigidity and guarantee extremely low mold wear



Encapsulated locking unit and pressure pads for extremely short cycles. The moving platen is manufactured in a box structure and optimized according to FEM (finite element method).

Durability is the keyword: Maximum mold protection combined with first-class part quality

Solid mold fixing platens ensure a high level of mold size flexibility for the MX and guarantee excellent platen rigidity. The mold fixing platens have been designed

in such a way that the mold parting lines are not affected and the molds are permanently protected. Thanks to the reduction in mold wear, you benefit from significantly lower maintenance costs and can sustainably optimize your production costs.

Low-maintenance operation

Self-lubricating guide bushes and slide rails with centralized lubrication ensure low-maintenance and trouble-free operation.



The force flow- and weight-optimized sliding shoes ensure that the moving platens are guided securely.



Premium-quality material combinations increase durability.

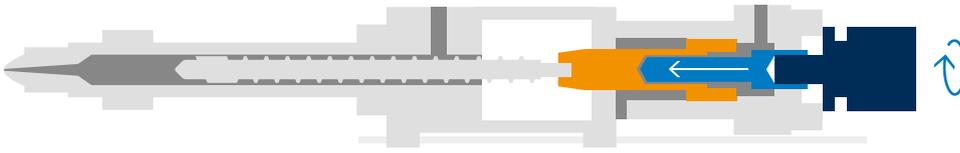


Molds are protected in every position thanks to the guided tiebars.

First-class plasticization, precise injection unit Exact in performance tuning, wear-resistant in operation



The injection unit is at the heart of our machines. It guarantees maximum precision and process stability.



Linear force transmission ensures maximum shot weight consistency.

Outstanding shot weight consistency combined with first-class repeatability

Take advantage of unlimited precision. The proven in-line injection unit with its rotary piston design transmits the force centrally via the injection piston onto the screw. Injection regulation of pressure and speed is a standard feature of the MX Series. It guarantees you maximum process stability and first-class repeatability.

Maximum productivity

The MX Series offers you a choice between hydraulic and electric screw drives. The electric drives enable plasticization in parallel to other machine movements, thereby creating a further increase in productivity.

High throughput with outstanding melt quality

Our plasticizing systems are characterized by their excellent melt quality and cover a broad range of applications for an extremely wide variety of plastics. Thanks to our years of experience and technological expertise, we understand the complex operations involved in plasticization. This is why we can guarantee a high melt specification, high throughputs and optimum melt quality. Choosing the right plasticizing system can improve the qual-

ity of your products and increase value retention.

The right screw for every plastic

In order to provide an ideal solution for the processing requirements of different polymers, we have developed material- and processing-specific plasticizing systems.

In addition to outstanding melt quality and high throughputs, high-tech plastics mostly require additional wear protection against adhesion, abrasion and corrosion. As a result, service life is also extended. Depending on the part requirement, special plasticizing systems containing specific screws, non-return valves and cylinder fittings are available to you. Using our plasticization systems, you can process the following materials, among others:

- PC and PMMA materials
- Short and long glass-fiber reinforced plastics
- Blends
- Recyclates

Plasticization is our core competence. In this area, there are virtually no limits set on your material-specific requirements.

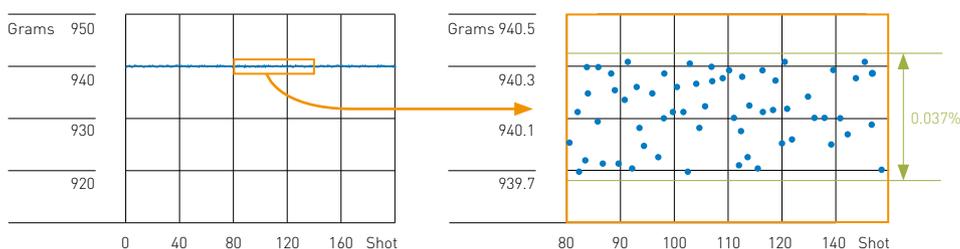


As a specialist in plasticization systems, we have a wide selection of screws in our range for you to choose from, up to a diameter of 265 mm

Your advantages:

- Outstanding shot weight consistency
- High level of part quality
- First-class process stability
- Longer service life
- High expertise with special polymers
- Fast plasticizing change

Shot weight consistency

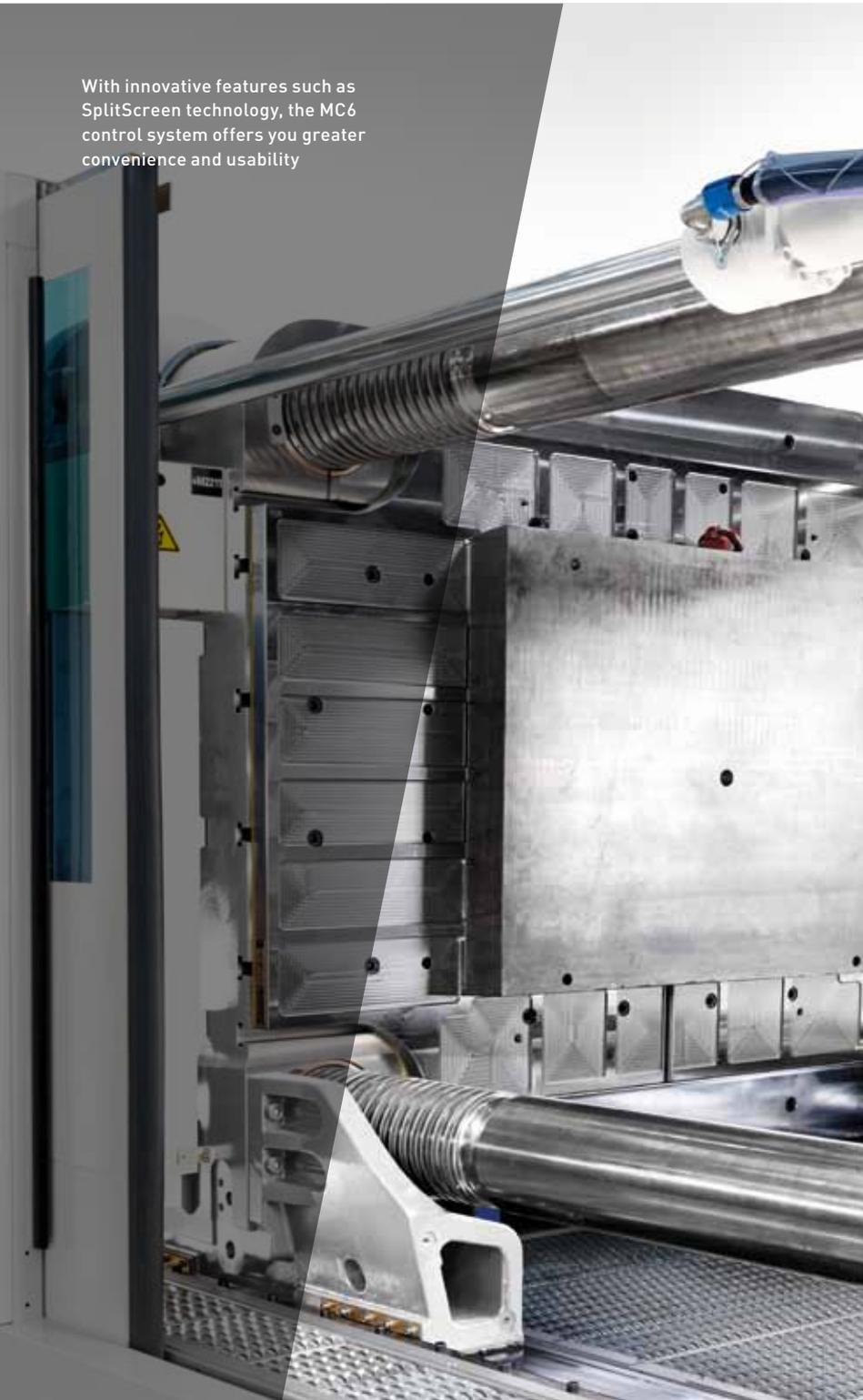


Shot weight consistency 0.037%, based on the example of 20 liter buckets in 2 cavities with a shot weight of 940 g (PE)

Usability is our top priority

The new MC6 control system with SplitScreen technology, ProcessDesigner and Eco function

With innovative features such as SplitScreen technology, the MC6 control system offers you greater convenience and usability





Do you get the most energy-efficient machine setting?
Always! - Simply press the Eco button

The new MC6 control system meets all of your usability needs.

Whether you are working with a KraussMaffei control system for the first time or you are accustomed to its MC5 predecessor – MC6 technology is so intuitively accessible that you will work better and more efficiently than ever before.

Everything in sight - thanks to the new SplitScreen technology

SplitScreen technology is one of the special highlights of the MC6: Thanks to the split-screen display, you can see the most important production processes simultaneously. In parallel with the actual value cycles, you can control, for example, the injection process.

Clarity thanks to the ProcessDesigner tool

The integrated ProcessDesigner tool provides a clear visual presentation of all current processes and enables you to modify them, depending on requirements, by means of simple drag-and-drop movements or swiping movements.

Destination reached with just two taps – thanks to a drop-down menu and a favorites bar

To ensure that handling the control unit is as user-friendly as possible, deeper navigation levels have generally been avoided with the MC6. Based on the credo "reaching the destination as quickly as possible", a clear overall concept with individually configurable favorites bars is produced. In order to guarantee optimum use, the machine keypad only provides the keys which can be selected in regard to the operating states of the machine. Our user-

friendly principle is rounded off by a special field for selecting systems. You can therefore directly select all components of the machine up to automation and technology.

Go Eco! Energy efficiency at the push of a button

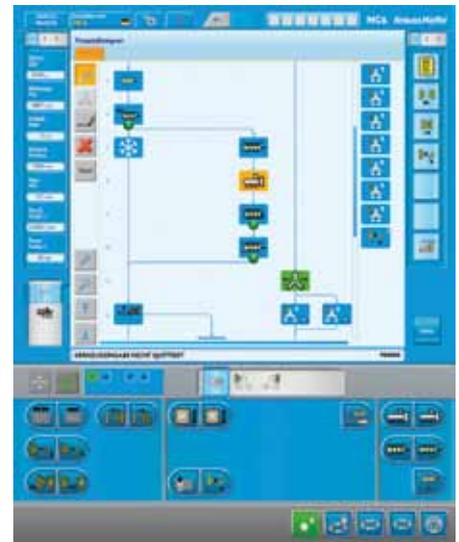
In keeping with our overall energy-efficient design, the MC6 control system has an "Eco button". This allows you to configure the machine in the most energy-efficient manner at the touch of a button.

Intelligent user profiles

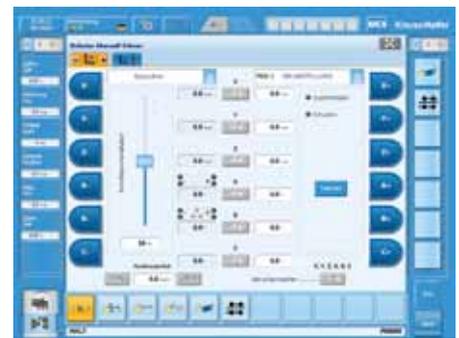
Thanks to standardized role profiles – from the machine operator and mold setter through to the production manager – you can assign different authorizations quickly and easily. Of course, you can also create additional hierarchy levels and assign individual rights to users. Another feature of the MC6 is the resistive dual-touch function which also allows the screen to be operated by a person wearing gloves. With a modern operating system, the MC6 is ideally equipped for today's technologies and those in the future. The MC6 control system can be ordered in more than 30 languages. And best of all: Every feature is available not only with the control system, but also on the handheld pendant.

Your advantages:

- User-friendly function principle
 - Simple process control thanks to SplitScreen and ProcessDesigner
 - Clear structures
 - Standardized user administration
 - Two-way operation of automation and machine possible
-



The MC6 control system impresses customers with its clear overall concept. Here using ProcessDesigner as an example.



You can operate the automation both from the handheld pendant and from the injection molding machine. And, with the MC6, even reverse operation of the injection molding machine is easy from the robot's hand-operated console.

Flexibility through modularity The MX machine can be individually combined



Versatile through customer-specific solutions: The MX machine can be individually configured

For MX Series machines, KraussMaffei can offer a great number of combinations for your individual clamping, injection and screw selection. Thanks to the comprehensive catalog of options (ZE/ Additional equipment), the machines can be configured to meet your requirements. In addition to the classic options, such as core pullers, cascades or hot-runner control stations, we also offer standardized special solutions. These include, amongst others, a wide variety of different types of mold tempering or quick mold clamping systems.

In addition, we also have optional modules such as DecoForm for over-molding and back-compression molding of sensitive decors (e.g. textiles, carpets, TPO/PP foam or imitation leather sheets) in our portfolio. Hydraulic options such as these can, of course, be individually connected or disconnected in order to increase flexibility in production.

Standardized interfaces (according to EUROMAP 70.0 or 70.1) facilitate convenient use of magnetic clamping platens for quick mold changing.

Your advantages:

- Machine built according to the customer's requirements
 - Quick mold change
 - Energy-efficient drive systems (possible savings of up to 50 per cent)
 - Efficient, modular hydraulic systems
-

Highly efficient hydraulic system

Precise in control, fast in controller behavior, energy- and cost-efficient

No compromises: Maximum injection speed at maximum injection pressure

In combination with the in-line injection unit, the intelligent hydraulic drive concept allows the machine to be driven within the key parameters of application-related process control. Especially for large and complex components, maximum injection speed and maximum injection pressure is required during the filling and holding pressure stage. This allows extremely short injection times and, consequently, a cycle time reduction of 5 to 15 per cent.

With the MX Series, we have opened the most useful process window possible in injection molding technology.

High level of process reliability thanks to precise and quick-acting proportional valves

Contrary to the market trend, KraussMaffei has always appreciated the value of precise and premium-quality proportional and control valves. In combination with the in-line injection unit, the injection process is controlled as a standard feature. This leads to extremely low levels of component stress and component distortion. In turn, this allows the MX, with its premium-quality hydraulic system, to achieve a level of process stability that is unmatched by the competition. For us, maximum availability and energy efficiency go without saying.

Focus on oil filtering: For minimal maintenance and operating costs

A bypass filtration system in the low pressure range allows a high deposition rate and long filter service life. During filtration, oil is continuously cleaned of particles via a fine filter. The level of oil purity achieved in this way leads to a longer service life for hydraulic components and the oil itself.



Parallel movements of ejector and core puller systems

Standard parallel functions of ejector/core puller systems and mold movements reduce your cycle times.

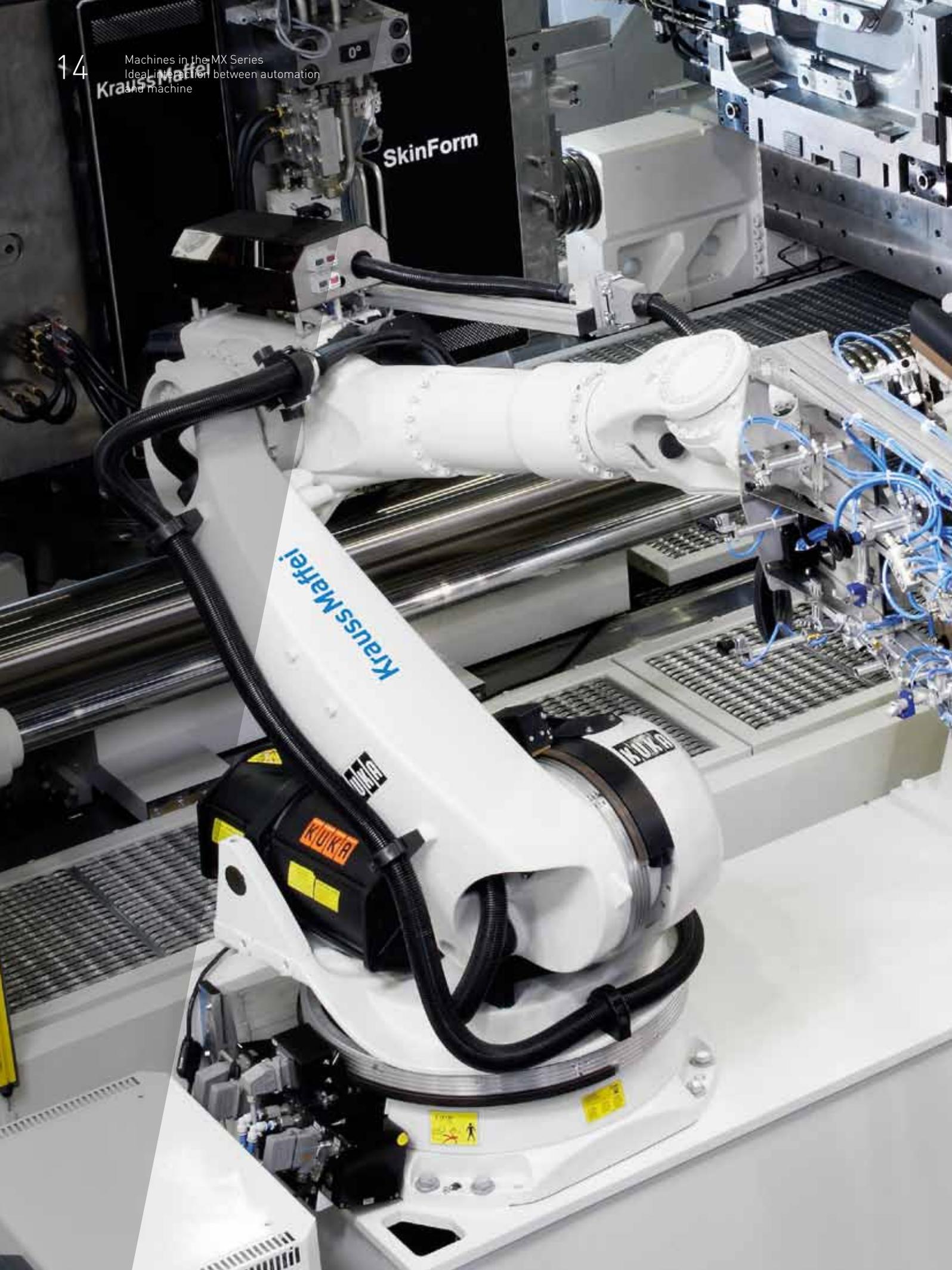
"Blue Power" efficiency solution – "Servo Drive Technology"

Through the optional use of "Blue-Power Servo Drive" technology, energy consumption is further optimized compared with variable delivery pumps. The savings made in comparison to other hydraulic concepts are between 10 and 30 per cent, depending on the particular application and, in comparison to

conventional hydraulic concepts on the market, may even be up to 50 per cent. A positive secondary effect is the lower noise level of servo drives.

Your advantages:

- Cycle time reduction of 5 to 15 per cent
- Quick dry-cycle time
- Increased injection performance
- Extremely low oil and lubricant consumption
- Easy-maintenance concept
- Durable hydraulic system
- High level of performance





Ideal interaction between automation and machine

Proven overall economic concept

Our extensive know-how in the areas of injection molding machinery and automation is your economic advantage. Standardized elements combined with customer-specific solutions form the basis for high flexibility in production. The integrated CE-approved safety concept ensures a high safety standard and reduces the machine costs.

Maximum variability thanks to standardized automation systems

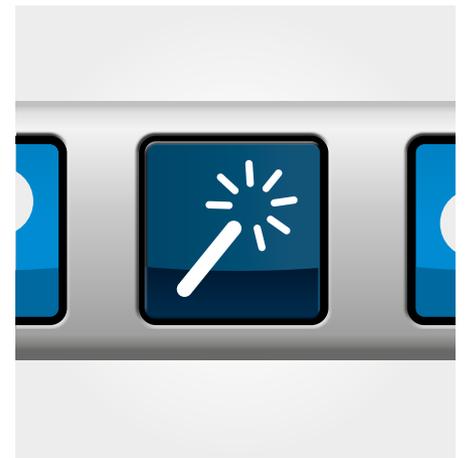
The linear robots from the LRX Series are ideally suited for simple pick & place solutions and quick removal. They also perform a very wide range of tasks in the injection molding process: Insertion, demolding, processing and much more besides. Thanks to integration in the control unit of the machine, all work steps can be very easily programmed and saved with the dataset of the injection molding machine. This automatically ensures the right combination of dataset and program – an advantage which also considerably increases machine safety.

Unlimited opportunities with the KraussMaffei industrial robot

The industrial robot (IR) guarantees maximum flexibility during complex demolding and a wide range of other assembly steps or production steps. The intelligent control system concept featuring a simplified user interface and an extended expert mode is suitable for every user group and helps you reach your goal with often just two clicks. The user interface of the handheld pendant can also be selected in the beginner mode or expert mode depending on the user authorization and hierarchy.

WizardX – Smarter programming

The dialog-based programming assistant in the MC6 control system allows even beginners to create basic demolding processes in the shortest possible time. The interactive communication between the user and control system makes manual programming superfluous and eliminates programming errors.



WizardX programming assistant
Easy to recognize by the "magic wand symbol"

Ideal interaction between automation and machine

Combination options



Linear robots

Machine/ clamping force in to	LRX 350 (payload: 35 kg)			LRX 500 (payload: 50 kg)			LRX 1000 (payload: 100 kg)		
	X [mm]	Y [mm]	Z [mm]	X [mm]	Y [mm]	Z [mm]	X [mm]	Y [mm]	Z [mm]
MX 1000	1200	2000/T	3500	1500	2500/T	4000			
MX 1150	1200	2000/T	3500	1500	2500/T	4000			
MX 1300	1200	2000/T	3500	1500	2500/T	4000			
MX 1600	1200	2500/T	4000	1500	2500/T	4000			
MX 2000		-		1500	2500/T	4000	2000	3000/T	5000
MX 2300		-		1500	2500/T	5000	2000	3000/T	5000
MX 2700		-		1500	3000/T	5000	2000	3500/T	5000
MX 3200		-		1500	3000/T	5000	2000	3500/T	5000
MX 4000		-			-		2000	3500/T	5000



Industrial robot (floor)

Industrial robot (console)

Machine/ clamping force in to	Industrial robot (floor)			Industrial robot (console)						
	IR 900 R2700 F/K	IR 1200 R2900 F/K	IR 1500 R3100 F/K	IR 300 R2630 S/K	IR 2100 R2900 S/K	IR 1800 R3100 S/K	IR 1500 R3300 S/K	IR 1200 R3500 S/K	IR 900 R3700 S/K	IR 1200 R3900 S/K
MX 1000										
MX 1150										
MX 1300										
MX 1600										
MX 2000										
MX 2300										
MX 2700										
MX 3200										
MX 4000										

Key for industrial robots: IR = Industrial robot 300 = Payload in N R2030 = Reach in mm F = Floor S = Shelf type K = KUKA

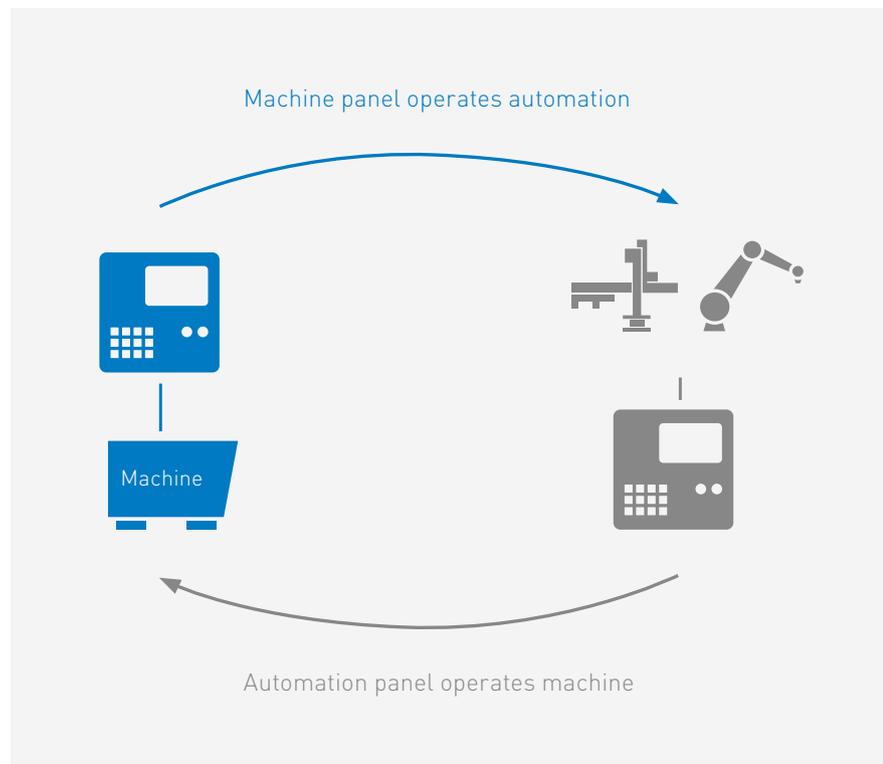
Integrative system: The perfect symbiosis of a machine and automation technology

As a system partner, we supply automation technology and a machine on request as a fully integrated overall concept. The machine and handling system form a functional unit in this case. The joint control system allows both functional units to be controlled on any control panel: Automation technology and machine. The machine can be operated via the handheld pendant of the robot - and vice versa. The perfect symbiosis of a machine and automation technology is rounded off by a standard safety housing.

The control system: Intelligent and integrated

The injection molding process and automation form one unit via the integrated control system with VARAN-BUS technology. Process data are available in real time. Programming and operation are easy and do not call for any in-depth programming knowledge. To permit optimum teaching and ergonomic programming, all LRX/LRX-S machines have a handheld pendant with a touchscreen display whose user interface is identical with the machine's control panel.

With the integrated solution, the entire process can be controlled via a common operating panel. The machine and robot data are saved in one dataset. This also ensures maximum data security and excellent optimum operating convenience. 20 safety zones, of which 5 are dynamic, increase the efficiency of the control programs.



Work is made easier through mutual operation - the injection molding machine can be controlled by the automation handheld pendant - and vice versa

Your advantages:

- Smarter programming operation with WizardX
- Integrated control system with central operating unit
- Machine and automation system as optical and functional unit
- Standardized discharge and set-up options
- CE conformity
- Wide range of automation systems from pick & place to highly complex solutions

Added value through combination Multinject technology for multi-component applications



Multinject provides a great number of injection molding variants such as the injection molding of moving parts, sandwich or composite injection molding. An extensive range of mold technologies can also be employed (e.g. sandwich, sliding split, sliding table and rotary table, swivel platen, indexing and transfer technology).

Image source: Wirth Werkzeugbau GmbH

Multinject is the KraussMaffei technology for combining thermoplastics, polyurethanes or elastomers in different designs.

With Multinject technology, KraussMaffei is offering a complete range of solutions for implementing multi-component applications. We can supply a complete package – including the multicomponent mold technology and extensive processing know-how. All these possibilities have one thing in common: the perfect interplay between the individual system

components. Our customers make it possible for us to re-apply our expertise with perfected solutions and/or develop it further with exclusive, cross-process technologies. This offers you security. The security of having efficient production cells as a reference for creating multi-component applications cost-effectively – whether standard or special – yesterday, today and tomorrow. A partnership with KraussMaffei can lower your part production costs. And it can also assure you of decisive competitive advantages, whether from cost-effective, high-performance production cells or from new-style processes.

Your advantages:

- Complete portfolio of efficient system solutions
- Comprehensive engineering and process expertise
- Modular machine technology with extensive options catalog
- Uniform control system with intuitive user interface
- Diverse areas of application, e.g. color change, hard and soft composites and/or innovative combinations with elastomers, rubber or polyurethane

Compact and foam injection molding of large-scale components using MuCell technology



MuCell has become firmly established in the world of plastics. Weight and material savings, dimensional stability and a higher level of productivity by cutting down cycle times are features which attract customers and developers from an extremely wide variety of sectors.

In collaboration with Mürdter and Trexel, KraussMaffei manufactured the world's biggest machine for compact and foam injection molding for manufacturing large-scale components for experimental trials and series production.

In order to satisfy the trend towards large-scale components in MuCell technology, KraussMaffei, in collaboration with Mürdter and Trexel, has equipped the world's biggest injection molding machine, which weighs 5400 t, for physi-

cal foaming. Using this machine, you are able to inject large-scale components compactly and compare them immediately afterwards with the MuCell process. Mürdter has large-scale machines available for experimental trials and low-volume series production. In the nearby mold-making department, the results are incorporated directly in the molds. In this way, you will in future be able to save time and money. KraussMaffei has been successfully using MuCell technology for a number of years and is a major individual customer of Trexel. The global authorization to directly market MuCell technology confirms our technological expertise. You can order your complete MuCell system

directly from KraussMaffei – without additional agreements with third parties, without teething problems during the course of the project and including all utilization rights.

Your advantages:

- Lower viscosity and better flow properties
- Elimination of the holding pressure phase
- Sunk spots omitted
- Shorter cycle times
- Low warpage
- Clamping forces considerably reduced

MX SpinForm technology

Your "turnaround" to more cost-effective production for functional components

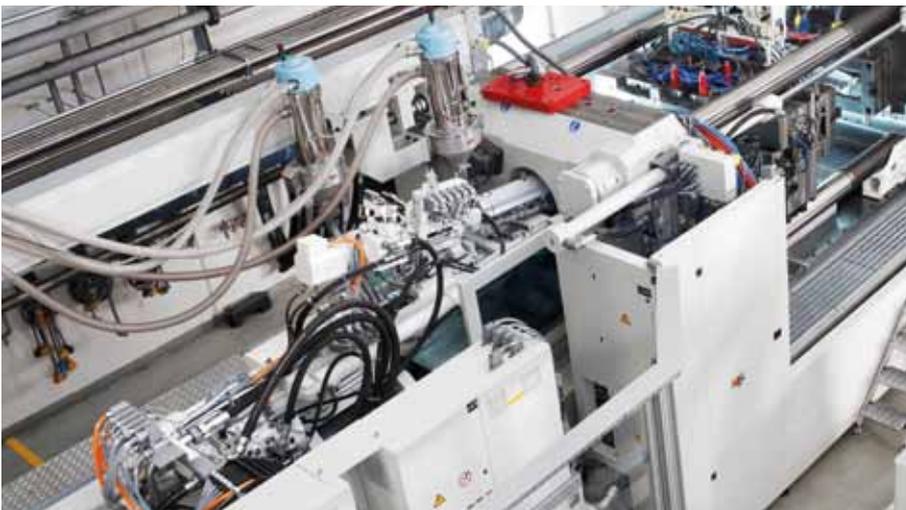
SpinForm technology enables optimum use of multi-component injection molding with advanced machine and mold technology. KraussMaffei provides you with the robust machine basis for your mold technology and the necessary process expertise, in order to exploit swivel platen technology to the full extent.

With SpinForm swivel platen technology, KraussMaffei is providing a multi-component concept which can be used to effectively optimize multi-component injection molding. In comparison to turntable molds, SpinForm offers numerous advantages, among which doubling the output while maintaining the same clamping force achieves the greatest effect. The SpinForm concept cannot be overlooked even for the production of large-scale two-component parts.

SpinForm is based on robust, standardized machine technology which has been successful on the market for many years and sets the standard in this technology sector. This concept works extremely accurately and also provides the precision required for complex compression processes. Thanks to the two-platen system and the spin unit, an extremely wide variety of different automation solutions can be quickly and easily linked – perfect for linear and six-axis automation.

Your advantages:

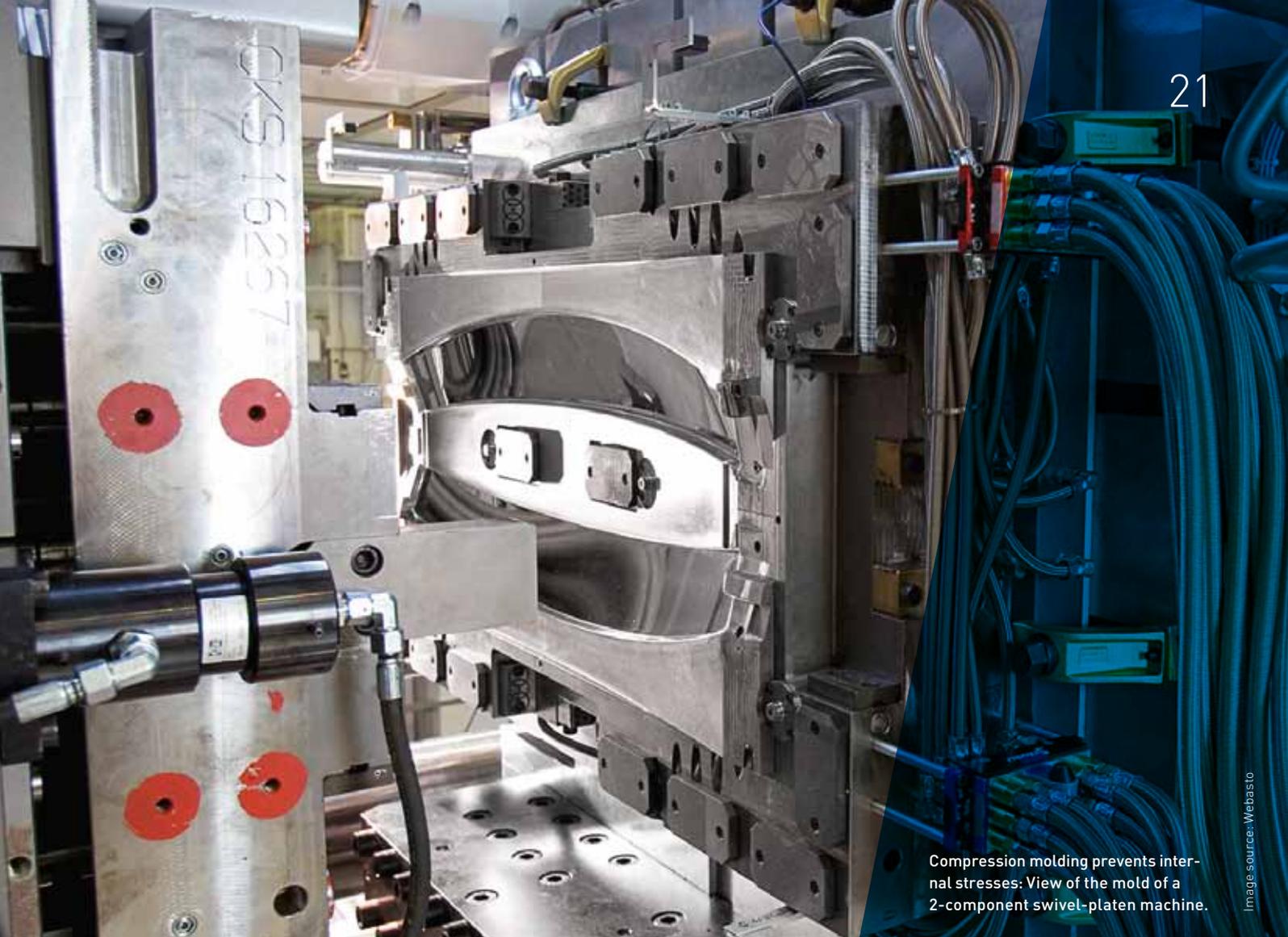
- Maximization of output
 - More possibilities for large-format components
 - Standardized systems across all clamping force sizes
 - Greater flexibility thanks to the unique design of the spin unit
 - Unit cost reduction thanks to process integration from a single source
-



Due to their general design, the SpinForm machines provide sufficient room for even complex periphery and automation equipment to be easily integrated.



MX Series designed as three-component SpinForm technology (swivel platen)



Compression molding prevents internal stresses: View of the mold of a 2-component swivel-platen machine.

Image source: Webasto

StampForm Compression molding processes for manufacturing optical parts

With our StampForm technology, we use the clamping movement of the injection molding machine to produce aesthetically perfect quality products. The areas of application range from the automotive and packaging industries through to the pharmaceutical industry. StampForm is unbeatable when it comes to its combination of process features: internal stresses are reduced, sunk spots are eliminated and practically no limits are set on the manufacture of surface structures.

Whichever process you choose, from injection molding or expansion injection molding, to compression molding or IMPmore, through to force molding, we will meet your requirements in every case. Take advantage of our accurate and quick clamping system, dynamic and high-precision mold movements as well as an extremely rigid mold guidance system with constant parallelism monitoring. KraussMaffei can look back over many years of expertise and comprehensive know-how in clean room applications. We adapt the clean room environment specifically to your requirements, thereby guaranteeing the best possible protection for your OK parts. With the customized plasticizing unit, you always achieve the

highest level of melt quality as well as a high level of shot weight consistency.

Your advantages:

- Choice of process according to your requirements
 - Accurate and quick clamping system
 - Customer-specific clean room environment
 - Customized plasticizing unit
-

Further information which might also interest you



Are you looking for the appropriate automation solution for your MX machine?

We can offer you the right robot for every production task. You can also equip your machine with a special clamping system or various accessories.

We have also compiled extensive information on the subject of service for you.

You therefore increase the flexibility of your injection molding machines for constantly new process requirements and permanently extend their performance level. We are happy to provide you with detailed information on this.



You can find more information about the following for example:

- Basis for economical production –
Linear robots in the LRX/LRX-S Series
- Flexible tools for productive automation –
Industrial robots in the IR Series
- Service and solutions

You can find our brochures and flyers on other topics online at: www.kraussmaffei.com.
On request, we would also be happy to send you information and technical data for our products free of charge.

KraussMaffei

A strong brand in a unique global group

Cross-technology system and process solutions

Whether in Injection Molding, Reaction Process Machinery or Automation – the KraussMaffei brand stands for pioneering and cross-technology system and process solutions in plastics processing worldwide. For decades, our expertise, innovative ability and passionate commitment to plastics engineering have been your competitive edge. As a cross-industry system provider, we offer you modular and standardized systems as well as solutions customized to your needs.

There for you around the world

With our worldwide sales and service network, we offer our international customers an excellent basis for a successful business relationship. Due to the close proximity to our customers, we are able to answer your individual inquiries very quickly. We work out the best possible technical and economical solution for your product and production requirements together with you. Test our machine technology for your applications and let our experts put together an individualized service package for you.

Individualized service

Our employees from customer service, application technology and service help you with your questions and needs on every topic dealing with machines, systems and processes – around the globe, quickly and with a high level of expertise. We have developed an extensive customized service spectrum with our lifecycle design, which accompanies you throughout the entire lifecycle of your machines and systems. Take advantage of the personal interaction and flexibility we offer in our practically oriented seminars. We carry out customer-specific trainings either at your location or at our sales and service locations.

You can find additional information about KraussMaffei at: www.kraussmaffeigroup.com

KraussMaffei Group

Comprehensive expertise

Unique selling proposition Technology³

The KraussMaffei Group is the only provider in the world to possess the essential machine technologies for plastics and rubber processing with its KraussMaffei, KraussMaffei Berstorff and Netstal brands: Injection Molding Machinery, Automation, Reaction Process Machinery and Extrusion Technology.

The group is represented internationally with more than 30 subsidiaries and over ten production plants as well as about 570 commercial and service partners. This is what makes us your highly skilled and integrated partner. Use our comprehensive and unique expertise in the industry.

You can find additional information at: www.kraussmaffeigroup.com



The KraussMaffei Group has a global presence. Countries with subsidiaries are marked in dark blue. In the white-colored regions, the Group is represented by over 570 sales and service partners.

Powerful. Versatile. Durable. Machines in the MX Series

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.

With the MX, you can increase your process quality and your production efficiency. Take advantage of our well-founded expertise, individually customized solutions and a professional, global service team.