

POWER MEETS FLEXIBILITY.

EXPERIENCE OUR ALL-ELECTRIC INJECTION
MOLDING MACHINES OF THE PX SERIES



Krauss Maffei
Pioneering Plastics

APPLICATION AREAS OF THE PX SERIES



Automotive



Medical



Electrical/electronics



Packaging

Clamping/injection matrix

Machine/ clamping force in to	Clearance (h _{xv}) in mm	Injection units (screw diameter in mm)																																			
		SP 55				SP 100				SP 180		SP 250		SP 380		SP 540		SP 750		SP 1000		SP 1400		SP 2000		SP 3000											
		15	18	20	22	20	22	25	28	25	28	30	35	30	35	40	35	40	45	40	45	50	45	50	55	50	55	60	55	60	70	60	70	75	70	80	90
PX 25	270 x 270	■	■	■	■	■	■	■	■					■	■	■	■	■	■																		
PX 50	370 x 320	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■																		
PX 51	435 x 385	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■															
PX 80	420 x 370					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■															
PX 81	485 x 435					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■															
PX 120	470 x 420					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■												
PX 121	530 x 480									■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■												
PX 160	520 x 470													■	■	■	■	■	■	■	■	■	■	■	■												
PX 161	585 x 535													■	■	■	■	■	■	■	■	■	■	■	■	■	■	■									
PX 200	570 x 520													■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■						
PX 201	635 x 585																■	■	■	■	■	■	■	■	■	■	■	■	■	■	■						
PX 250	620 x 570																■	■	■	■	■	■	■	■	■	■	■	■	■	■	■						
PX 251	735 x 685																■	■	■	■	■	■	■	■	■	■	■	■	■	■	■						
PX 320	720 x 670																			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
PX 321	820 x 770																						■	■	■	■	■	■	■	■	■	■	■	■			
PX 400	820 x 770																									■	■	■	■	■	■	■	■	■			

POWER MEETS FLEXIBILITY THE ALL-ELECTRIC PX SERIES

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. Simply configure the machine of your dreams!

A robust mechanical system, high-precision and dynamic drive technologies as well as intelligent energy management make the PX a reliable, productive and efficient performer in any injection molding operation. An ergonomically optimized working height, with maximized free space below the clamping unit and the best accessibility ensure maximum ease of use. The PX series stands out with its flexibility throughout the entire service life:

Flexibility in selection

- Wide selection of clamping and injection unit combinations
- Many options for greater performance and function

Flexibility during production

- User-friendly ergonomics and accessibility
- Easy mold change and fast startup

Flexibility for retrofitting

- Options for an expanded range of applications
- Always up-to-date with service products

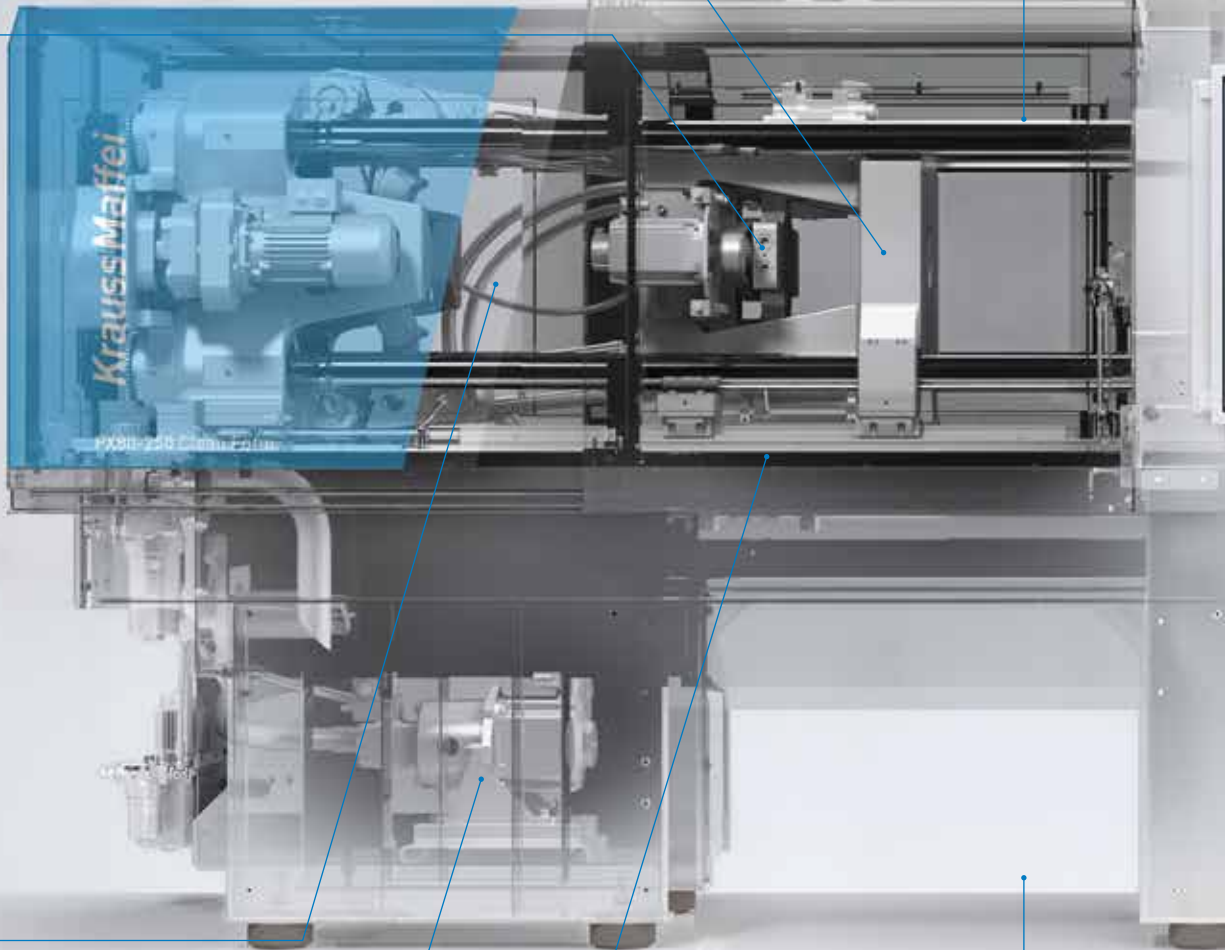


Extensive automation solutions

Broad-based moving mold platen on linear guides

Two platen sizes for each clamping force

Ejector with a large stroke (hydraulic or electric)

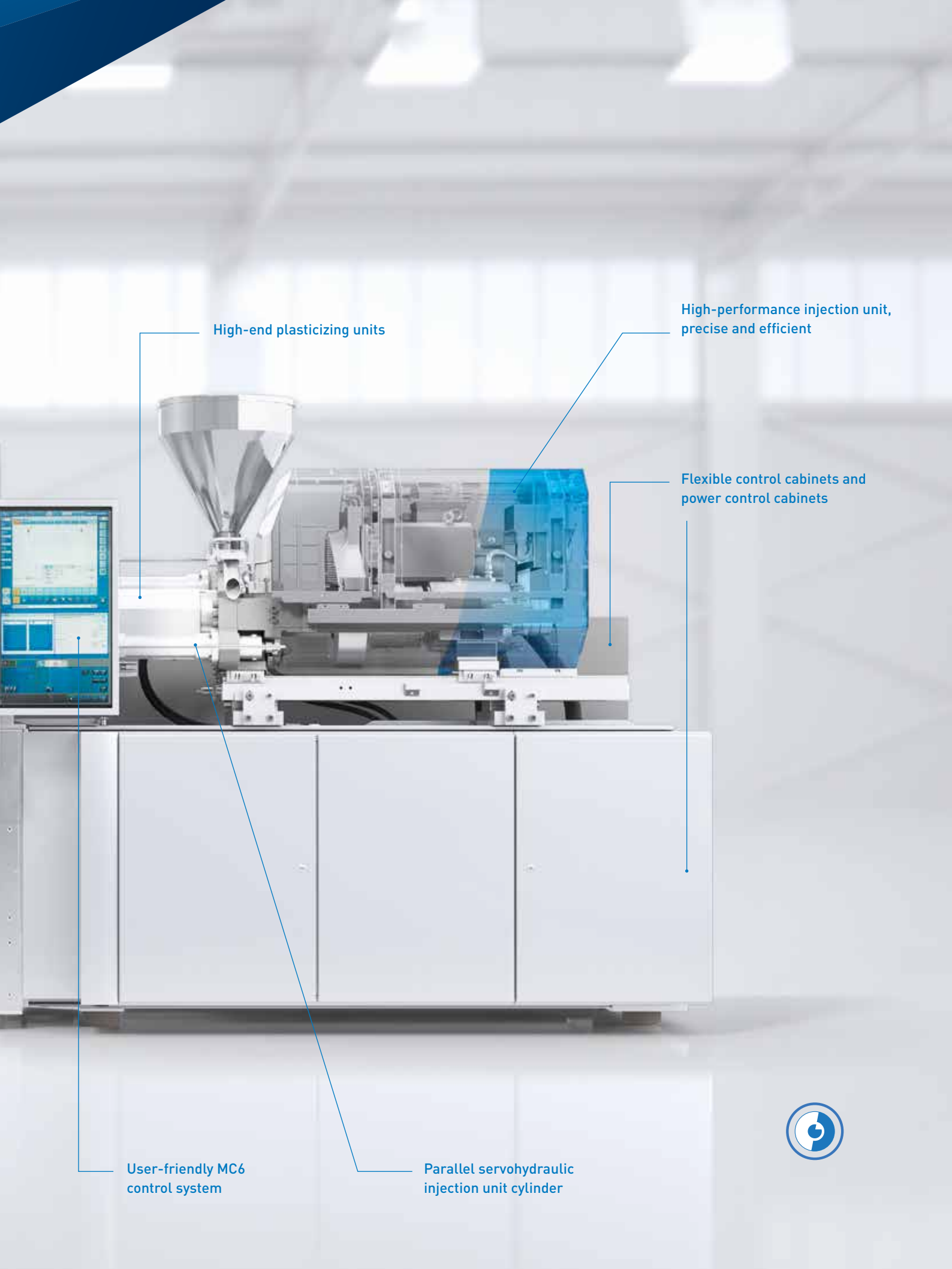


Fast, robust 5-point double toggle

Integrated servo hydraulics

Optimum accessibility

Maximum free space for parts logistics



High-end plasticizing units

High-performance injection unit, precise and efficient

Flexible control cabinets and power control cabinets

User-friendly MC6 control system

Parallel servohydraulic injection unit cylinder



A MARVEL OF FLEXIBLE DESIGN LEADING COMBINATION FOR CLAMPING AND INJECTION UNITS

The custom combination of injection and clamping units forms a core feature of the PX. It allows the series to set new standards for production flexibility: configure the exact machine that you require. No more, no less.

Versatile clamping unit for outstanding productivity

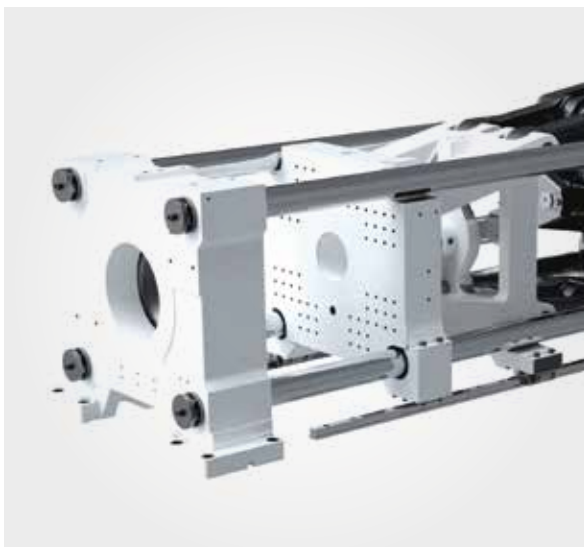
The efficient and highly dynamic 5-point double toggle lever coupled with intelligent servodrive technology ensures outstanding productivity and cost-efficiency while also providing optimal mold protection.

Great variety of clamping unit/injection unit combinations

Perfect utilization of production space: Thanks to the split machine bed, the clamping unit and the injection unit can be combined in a variety of ways – making the machine only as long as it really needs to be. For example, if a large clamping unit is combined with a small injection unit.

YOUR BENEFITS:

- Optimal length and space utilization
- Targeted investment in clamping force and injection capacity
- Flexible mold insert
- Short cycle time
- High availability
- Low energy costs
- Extremely wide range of applications
- Lowest wear rates
- Excellent melt quality
- High plasticizing capacity



The 5-point double toggle is efficient and extremely dynamic.



The PX represents quality and efficiency for every shot.



The PX offers an enormous variety of clamping unit/injection unit combinations

First-class injection unit

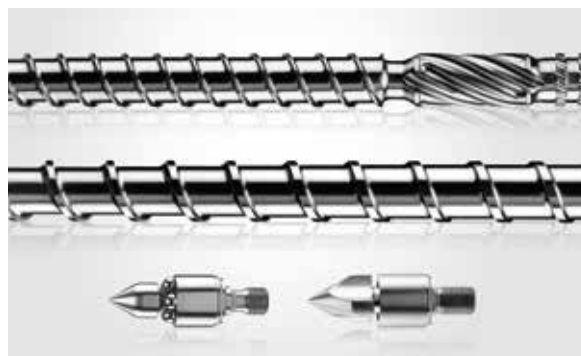
When a first-class plasticizing unit and precise drive systems are working together in harmony, this results in maximum shot weight consistency. The PX reproduces parts with exceptional quality and efficiency – shot for shot.

Two parallel servohydraulic injection unit barrels allow for an optimal center nozzle contact force – extremely fast and free of lateral forces. This shortens the cycle times and prevents leaks at the nozzle.

The entire bandwidth of screws and non-return valves

All standard PX plasticizing units stand out thanks to an excellent melt quality and cover a wide range of applications. Furthermore, if you have special processing requirements, you can choose from a wide range of

screws and non-return valves – even for high-temperature and high-performance versions (HPS) and, of course, with suitable wear protection.



Select your screws and non-return valves from a wide spectrum of products.

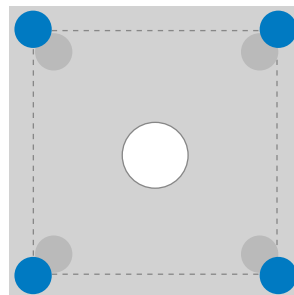
OPTIMIZED CLAMPING UNIT DESIGN

THE MODULAR DESIGN CREATES FREEDOM FOR MOLD USE

The standard PX already features mold fixing platens with generous dimensions, mold installation heights and mold opening strokes for flexible use of molds of various sizes. And if that isn't enough, options are available to expand certain attributes, such as the mold installation height.

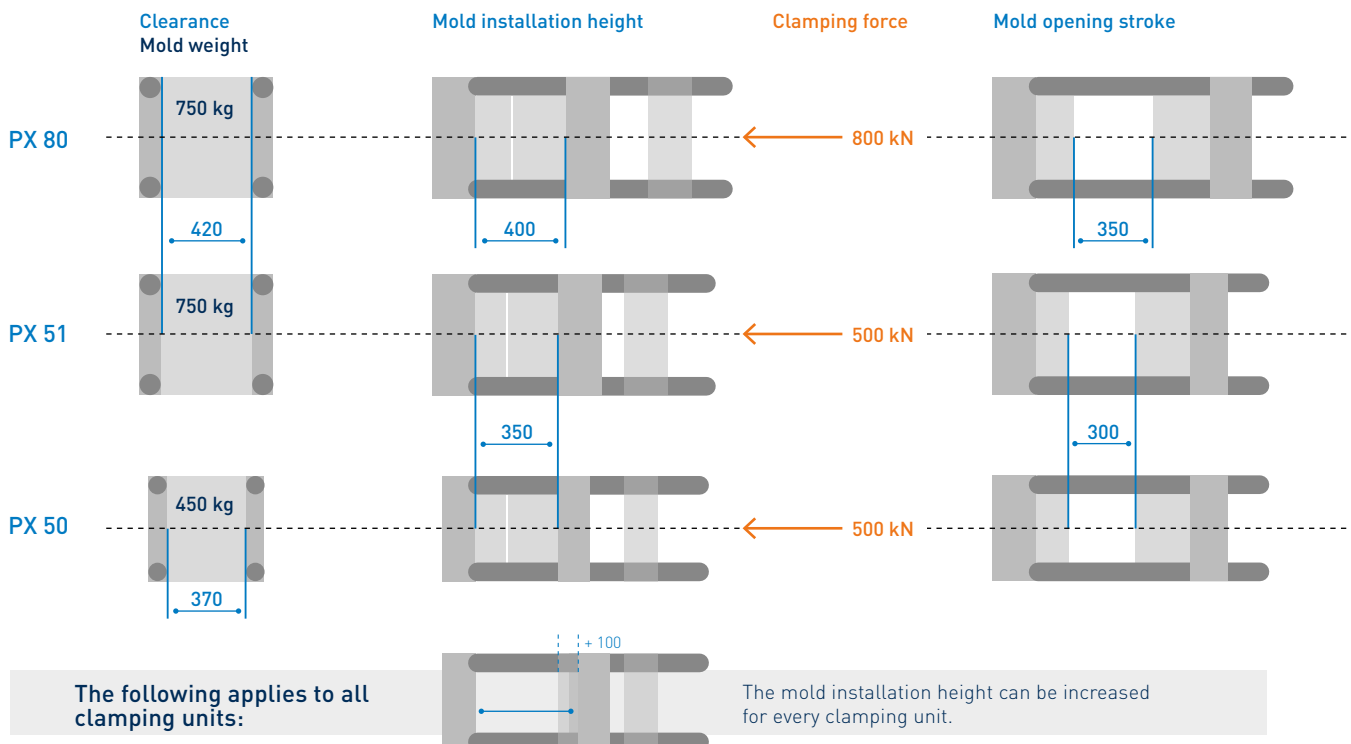
Enlarged mold fixing platen

80 tonnes of clamping force would be enough, but your mold needs more space? Then opt for the PX 81. This will give you considerably more mold installation space for even more adaptability in everyday manufacturing. You achieve this adaptability without having to purchase the machine with the next level of clamping force. Of course, the maximum permitted mold weight is increased as well.



Enlarged platens

The right clamping unit thanks to the modular design



The PX offers an enormous variety of clamping unit/injection unit combinations



YOUR BENEFITS:

- Lower investment costs
- More flexibility for mold use
- The largest ejector stroke on the market
- Superior ejector accessibility
- Outstandingly robust
- Maximum platen parallelism
- Use of heavy molds
- Protection of the mold

Maximum platen parallelism for any mold weight

More space means more weight. With the PX, you can be sure that if the mold fits into the machine, then the clamping unit has also been designed for the greater mold weight. The wide support of the moving platens on linear guides and the stiff machine bed under the clamping unit guarantee perfect platen parallelism.

Servohydraulic ejector

The standard ejector of the PX is driven using the integrated servo hydraulics and stands out on its own thanks to several features. The ejector stroke is especially large, enabling you to run molds with correspondingly long demolding paths. The ample opening range of the safety gate and the wide design of the moving platens allow for easy access to the ejector.

ABSOLUTE FLEXIBILITY GREATER SELECTION OF EJECTOR VERSIONS

Robust or intricate: Either a servohydraulically driven ejector or an electrically driven ejector is advantageous depending on the requirements during parts removal. The PX offers both options.

Robust and flexible: The hydraulic ejector

In your production, are you using molds with hard striking ejector plates? If so, the extremely robust hydraulic standard ejector of the PX is perfect for your needs. It can withstand all mechanical pulses or impacts from the mold. The large ejector stroke also provides a great deal of flexibility for any mold.

If more ejector force is required, an increase of 50 percent can be selected for any PX. In order to optimize the removal of free-falling parts, the ejector speed can even be increased by 100 percent. In addition, every ejector is optionally available also as an ejector plate.

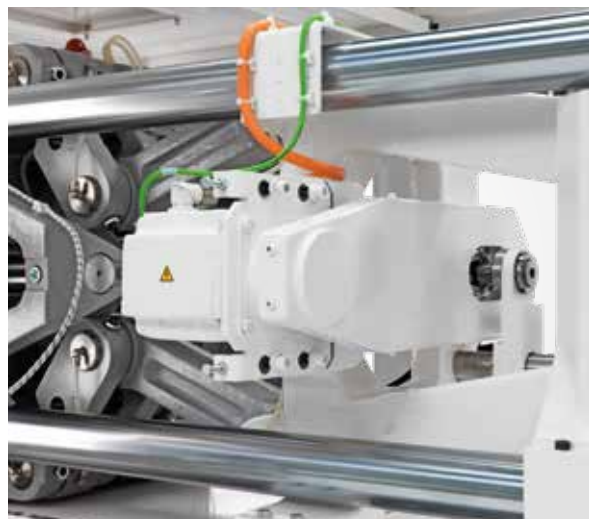


Extremely precise: The electric ejector

Do you want precise transfer of parts to a robot removal? If so, the optionally available electric ejector for the PX is recommended. It works with absolute precision and reproducibility. As is the case with the hydraulic ejector, the electric ejector also features versions with increased force or speed. Every electric ejector features a motor brake to hold the position for spring force molds. For particularly clean ambient conditions, it can also be encapsulated.

YOUR BENEFITS:

- Suitable ejectors for any mold
- Fast and easy setup
- Precision demolding for more good parts
- Clean production



More speed: The increased ejector speed compensates for the dynamic movement of the clamping unit in the case of falling parts.

Increased ejector force: When plastic parts shrink down to a core, the increased speed helps during demolding.

POWER AND SPEED THE "BOOST" FOR THE INJECTION UNIT

Material, part geometry, desired output. These values define how high the performance of the injection unit of a machine has to be. The PX meets your needs through flexibility.

More injection speed

For components with thin wall thicknesses or long flow paths, every PX has the option to be equipped with increased injection speed.

More nozzle contact force

Thanks to the two servohydraulic injection unit barrels, the PX standard alone features sufficiently high nozzle contact forces. If very high nozzle contact forces are needed for special nozzle geometries, e.g. for dipping nozzles with large cross-sections, then this can easily be configured for the PX using the assembly kit with additional options.

More plasticizing capacity

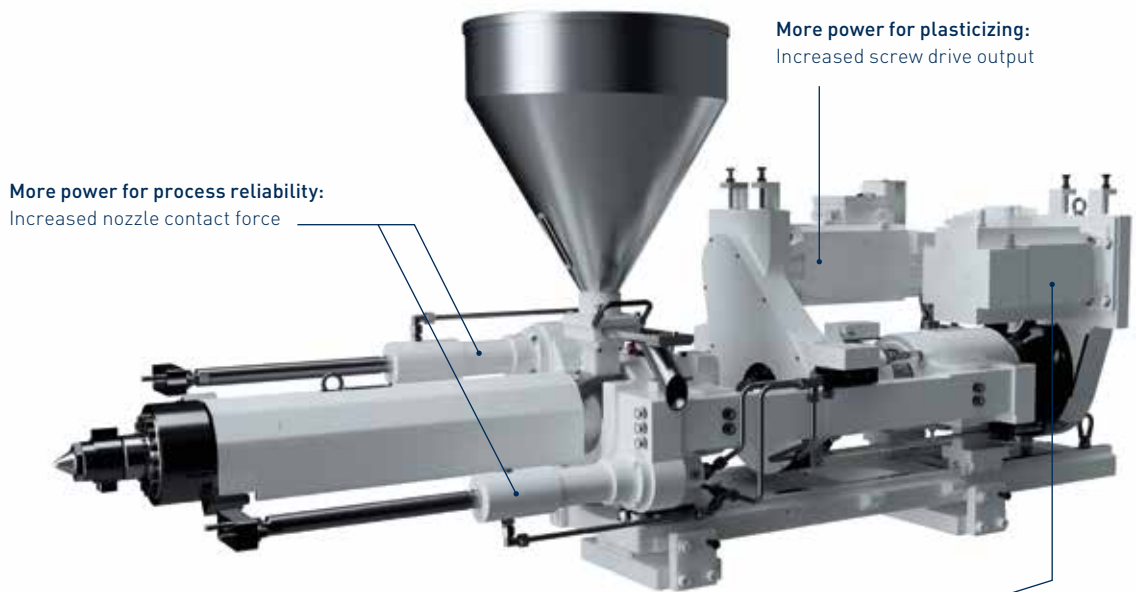
Do you want to increase the output for your applications by increasing material throughput? No problem. With the PX, each injection unit is also optionally available with increased screw drive capacity.

More injection unit speed

Due to the high-performance integrated servo hydraulics, the travel speed of the injection units of the standard version alone is at least 50 mm/s. An option even exists to double the injection unit speed of any PX to 100 mm/s. Therefore, in applications using lift-off nozzles, cycle time can be significantly shortened and the start-up accelerated.

YOUR BENEFITS:

- Flexible use for a wide range of applications
- High injection capacity
- Flexible use of molds and nozzles
- High plasticizing capacity
- Short cycle time
- Faster start-up



The injection unit of the PX provides you with the performance capacity that you need.

More power for injection:
Increased injection speed

IDEAL FOR WORK IN ANY SIZE ALWAYS THE RIGHT WORKING HEIGHT AND CONVENIENT ACCESS

Daily work has to run smoothly. This requires sophisticated processes, ergonomics and a practical machine that makes operation and maintenance easy.

The working height: Exactly the right level for you

The machines of the PX series make it possible for every mold setter to work ergonomically at a comfortable height – for insertion and connection of the mold, for visual inspection of the nozzle or for cleaning tasks.

MC6: Height-adjustable

The MC6 control panel can be swiveled as well as set to your desired working height easily and with infinite variation. In addition, you can select a "Multitouch" MC6 control unit and benefit from a capacitive 24-inch control unit. This gives you a view of all processes and allows you to create a custom setup of your user interface by dragging and dropping.



YOUR BENEFITS:

- Perfect overview of all processes
- Superior user-friendliness
- Ergonomic working height
- Optimal view into the machine

Access to the PX is very convenient and allows for ergonomic work.

Perfect accessibility from all sides

The PX stands out due to extensive accessibility to all areas of the machine. Large, smooth safety gates ensure undisturbed access to the clamping unit without a frame getting in the way. And with removable housing elements, all machine parts can be accessed easily for maintenance and cleaning tasks.

Free space: more room for parts logistics

The clamping unit bed of the PX has been designed so that the area lengthwise and crosswise and all the way to the floor remains free for reject parts and parts logistics. As a result, parts containers or conveyor belts can be rolled under the machine very easily and practically, without any cross-beams getting in the way.



YOUR BENEFITS:

- Perfect accessibility
- Simplified mold change
- Generous free space below the clamping unit
- Easy installation of conveyor belts
- Optimal utilization of the production space

The PX leaves plenty of room for conveyor belts and part containers.

IT DOESN'T GET ANY MORE PRECISE FEWER REJECTS AND PERFECT QUALITY

A smooth, zero-play and robust mechanical system as well as accurately and dynamically functioning drive systems are the prerequisites for maximum precision. Both have been implemented for the PX without any compromises. The result is perfect part quality for maximum customer satisfaction.

Symmetrical force transmission for optimum clamping of the mold

The tightly toleranced and totally symmetrical design of the clamping unit produces direct and uniform force transmission on the moving and fixed mold fixing platen.

A servomotor that is optimally coordinated with the toggle guarantees fast and high-precision clamping and opening movements. As a result, each position movement of the moving platen is always carried out with absolute reproducibility and accuracy.

Parallel mold guidance always clean and efficient

The wide support of the moving platen on precision linear guides guarantees a precise mold parallelism in all positions. The frictional resistance is also reduced by up to 80 percent in comparison to the usual sliding guides or column guides.

Thanks to the linear guides, the tiebars are only used for force transmission and do not touch the moving mold fixing platen in any way. Lubrication is unnecessary, the product zone remains clean.

YOUR BENEFITS:

- High platen parallelism
- Optimal mold clamping
- Grease-free tiebars for increased cleanliness
- Maximum energy efficiency



Every PX clamping unit is optionally available with automatic clamping force regulation (+/- 2 percent).



Reproducible processes due to built-in precision and dynamism

High-precision and dynamic servomotors with extremely fast response characteristics generate the injection movement, which is transferred directly to the screw by a spindle system with zero play. The configured process parameters for speed, pressure and stroke are regulated quickly and precisely within the minimum tolerance range. Sensitive sensor technology measures the injection pressure directly in the flow of force as an absolute value. This ensures precise regulation of holding and back pressure. By combining optimal repeatability and plasticizing, the PX offers ideal conditions for first-class shot weight consistency.

APC plus: Intelligent machines

APC plus recognizes process fluctuations, which can be caused by changing ambient conditions or fluctuating viscosity, and independently adopts counteractive mea-

asures. You thus benefit from constantly high component quality, lower scrap rates and material costs, as well as the simplified use of recycled materials.

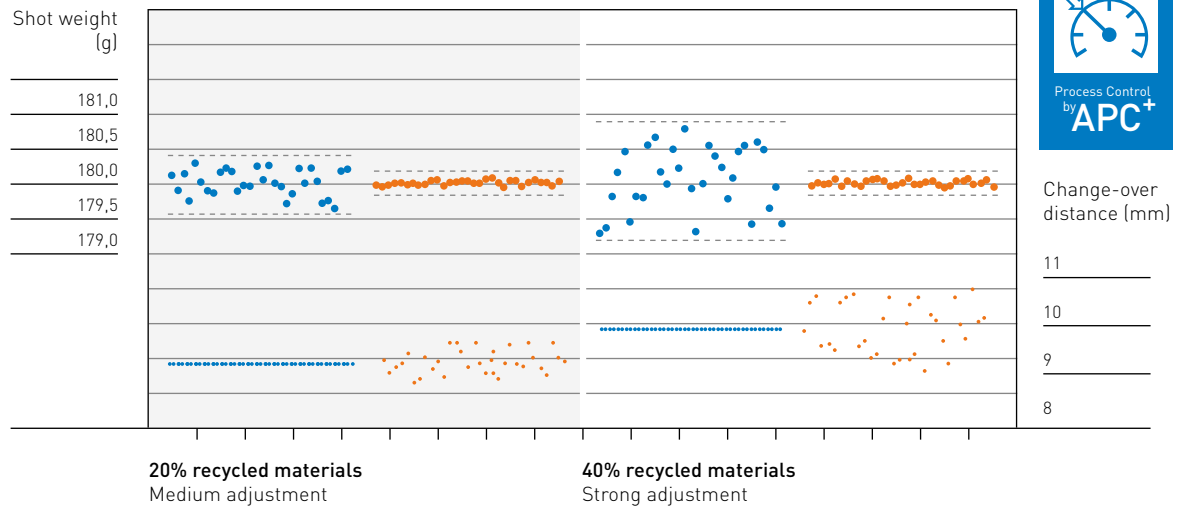
APC plus: Perfect shot weight consistency

APC plus monitors the melt viscosity during injection and regulates the change-over point and holding pressure in the same shot in accordance with the material characteristics – for constantly optimal mold filling. The optimized user-friendliness makes process control easier. Also for cascade injection molding or the manufacture of thin-walled parts, APC plus ensures perfect component quality with a constant mold volume.

YOUR BENEFITS:

- First-class shot weight consistency
- High process reliability
- Consistently high component quality
- Compensation of batch fluctuations in the material

Shot weight consistency: use of recycled materials of 20% and 40% – each with and without APC plus



- Standard: Change-over point constant
- With APC plus: Change-over point adjusted

UNBEATABLE ENERGY EFFICIENCY

SAVING ELECTRICITY, WATER AND YOUR MONEY

Preserve resources and lower operating costs simultaneously: Intelligent energy management makes both possible. The PX recovers brake energy and can even feed electricity into the grid.

Lowest energy consumption thanks to maximum efficiency

The PX is exceptionally economical, featuring very high overall efficiency and consuming an extremely small amount of energy under all load and application conditions. In many cases, this allows it to reduce energy consumption by 50 percent or more in contrast to similar injection molding machines.

The PX has also proven itself to be economical when it comes to water consumption. Due to the low conversion losses in the drives, the inner cooling load is very low and reductions of up to 70 percent are not at all uncommon.

Feeding of brake energy for the PX series

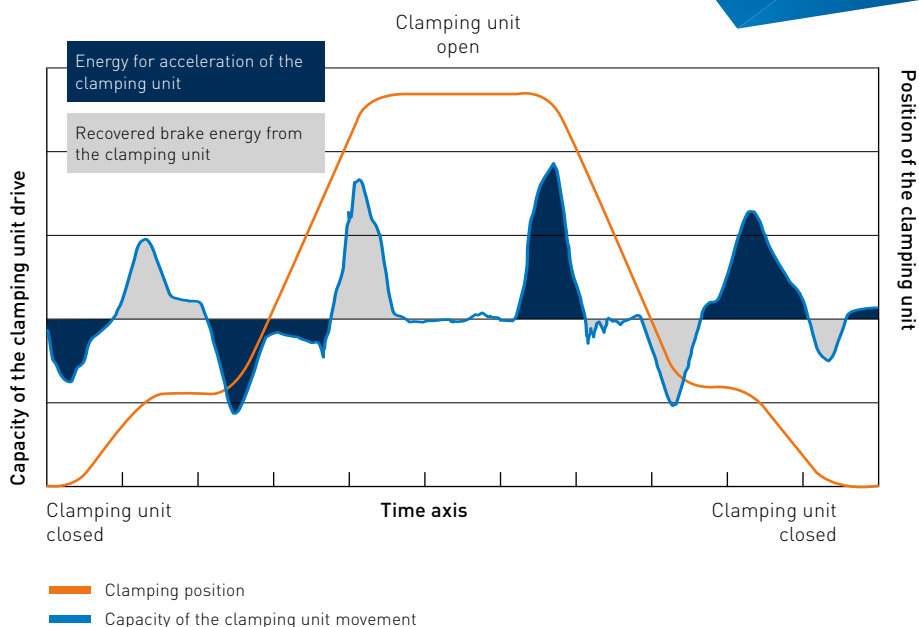
Energy management with recuperative mode

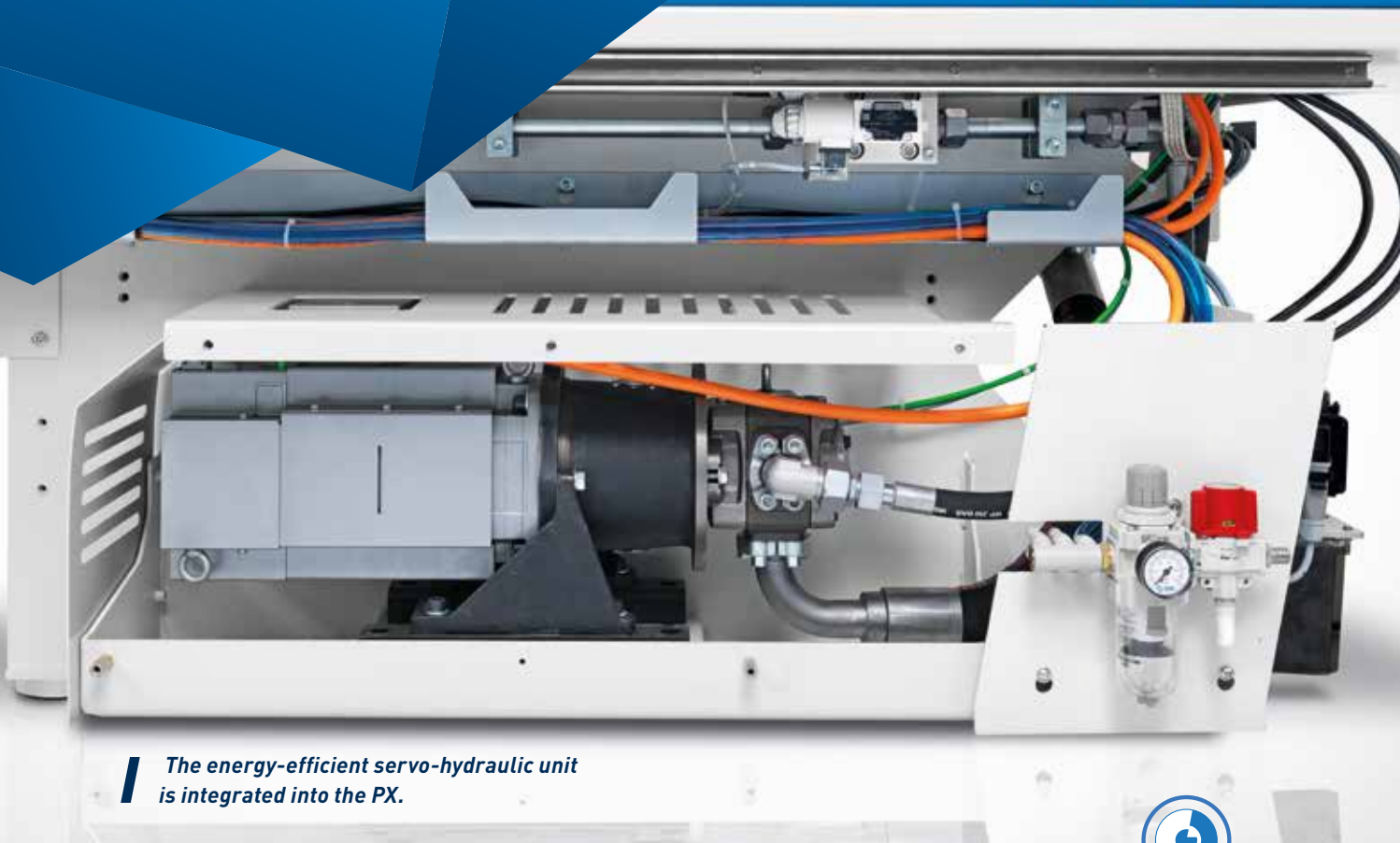
Efficient drive systems with integrated energy recovery: The frequency converters and servomotors of the PX are perfectly adapted to the respective servo axis. Therefore, they respond quickly and directly to each control system command.

All servomotors also work in recuperative mode, whereby brake energy is converted back into electricity. This energy is recovered and stored in the intermediate circuit of the machine and then used in the same way at other axes or fed back into the power supply system. Up to 60 percent can be reused via this method.

YOUR BENEFITS:

- Recovery of brake energy
- Feeding energy back into the grid
- Minimum energy consumption
- Low water consumption
- Low heat emissions





The energy-efficient servo-hydraulic unit is integrated into the PX.



EVERYTHING YOU NEED IS THERE INTEGRATED SERVO HYDRAULICS

Everything perfectly built in: For the PX, the servo hydraulics for injection unit and ejector movements are integrated into the machine. If necessary, the machine also drives core-pulling units or needle shut-off nozzles.

Integrated servo-hydraulics, intelligent machine design

Unlike commonly available solutions, which waste space by including separate ancillary hydraulic injection units, the energy-efficient servo-hydraulic unit is already integrated into every PX. In the standard version, this unit operates the axes of the injection unit and ejectors. They save production space, since everything is built into the machine bed.

Simple powering of additional hydraulic consumers

Using the integrated servo hydraulics, you can also use additional hydraulic machine and mold functions very easily – such as core-pulling units, needle shut-off

nozzles or cascades. All applications can be retrofitted easily and without a lot of effort and can then be programmed using the MC6 control system.

The servo hydraulics in the standard version alone offer sufficient volume flow for carrying out numerous hydraulic mold functions. For special cases, the capacity of the hydraulic unit can be increased further – all within the machine with no external components.

YOUR BENEFITS:

- Easy use of core-pulling units without large additional investment
- No additional space requirements for separate hydraulic units
- Preparation for all contingencies

EVERYTHING FOR YOUR MOLD

ADDITIONAL OPTIONS FOR RETROFITTING

Core-pulling units, cascades or cooling. In order to be able to manufacture using all types of mold technologies in the future, many retrofit options are available for the PX. You can buy only the functions that you need right now and still be sure that your machine is prepared to take on any additional functions as necessary. KraussMaffei is the only manufacturer to offer this level of flexibility in an all-electric range.

Core-pulling units and needle shut-off nozzles

In the case of the PX, hydraulic mold functions such as core-pulling units or needle shut-off nozzles can be retrofitted very easily. This is because the servo hydraulics necessary for supplying these units/nozzles are integrated into every PX. Even in the standard version, the hydraulics achieve high volume flows that can be increased if necessary. All functions can be programmed directly using the MC6.

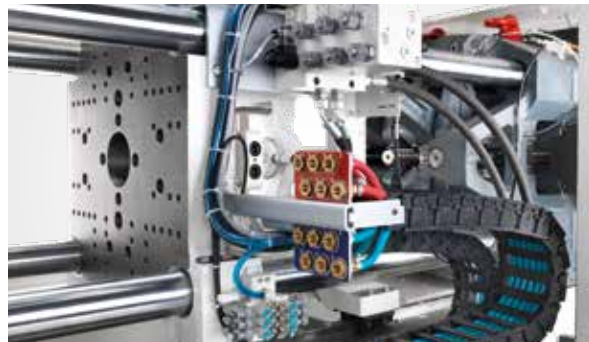
Well cooled and clearly arranged

Everything has its place on the PX. This makes it easy to take advantage of the options for mold cooling and heat-balance. Connections that have been pre-piped via the water distributor for cooling-water and temperature-control circuits are situated close to the mold, thus making mold changeover much easier and keeping everything in order.

The electronic water distributor also adds to the efficiency. It records the flow rate, pressure and temperature automatically and ensures that data no longer needs to be documented manually.



The PX has a lot to offer for mold cooling and heat-balance as well.



Core-pulling units can be retrofitted easily.

YOUR BENEFITS:

- Space-saving and clean
- Easy, central control using the MC6
- Perfectly set up for all future tasks

EASY RETROFITTING

HARDWARE RETROFITTING IN THE CONTROL CABINET

Expansion made easy: For additional control system electronics, the control cabinets are already preconfigured for additional retrofits.

Future-proof thanks to reserve space

Still not sure what your requirements will be in the future? That's not a problem for the PX. Every control system cabinet is already preconfigured for the entire range of additional options. This means that you can, for example, easily retrofit additional controllers for the plasticizing unit or for the mold heating unit.

Some examples of possible retrofits

- Additional barrel heating units
- Boosted hydraulic unit
- Activation of the hydraulic system and pneumatic valves
- Automation interfaces
- Conveyor belts, drop-out chutes
- Interfaces for monitoring systems (camera, scales, etc.)
- Interface for magnetic clamping platens
- Data from interfaces (Ethernet, CIMI)
- Master computer interface (Industry 4.0)
- And much, much more...



YOUR BENEFITS:

- The highest safety standards
- Space and capacity reserves for retrofits
- Extensive options catalog

The control system cabinet is preconfigured for many additional options.

SUPERIOR USER-FRIENDLINESS

MANY ADDITIONAL FUNCTIONS MAKE OPERATION EASIER

With the intuitive MC6, KraussMaffei has developed a system that improves every facet of machine operation for the user. Our experienced software specialists always strive to develop useful functions that keep navigation simple.

Quick to program, clever configuration tools

The following tools in the MC6 control system help you when programming and setting up your injection molding machine

- SplitScreen & XtraScreen (MC6-Multitouch):
The most important production processes at a glance
- Process Designer: Clear display & handling of all processes
- Barrel Heating Assistant: Fast loading of barrel temperature profiles and calculation of the target values
- Weekly Timer: The machine is completely heated at the defined production start time
- WizardX Programming Wizard: Achieve a functional basic program in only four steps

Large selection of retrofits

The MC6 control system can be continually readjusted throughout the service life of the machine. To display any curve, such as the pressure curve, you can retrofit the graphic analysis package. Trend graphics identify even the smallest fluctuations. Using APC plus, you can achieve a constant part quality. And interfaces for tempering units can be added easily.

Perfect monitoring

Various tools help you in monitoring the processes. For example, the cycle time analysis continuously monitors whether all processes are running optimally. The log-book saves all data and thereby ensures maximum transparency. The camera function gives you the best insight into (and overview of) the machine. If problems arise, you can use the Remote Manager to get in contact with our experts.



The MC6 control system represents superior user-friendliness.

READY FOR INDUSTRY 4.0

We are working today on the possibilities of tomorrow: Communication among machines and peripherals, intelligent machines that configure themselves and a service that notices that something is wrong even before you do. **Please contact us.**

YOUR BENEFITS:

- High level of user-friendliness
- Fast and accurate navigation
- Intelligent support of the mold setter
- Quick and efficient process control
- Supporting optimization tools

RETROFIT FOR TECHNOLOGY MACHINE SILICONE, LIGHTWEIGHT CONSTRUCTION AND MORE

You never know what the future will bring. If you ever need to expand your way into new technological areas, you can count on the PX to provide you with a solid basis. For example, for lightweight construction processes such as CellForm or FiberForm, for processing liquid silicone or with applications in the high-temperature area.

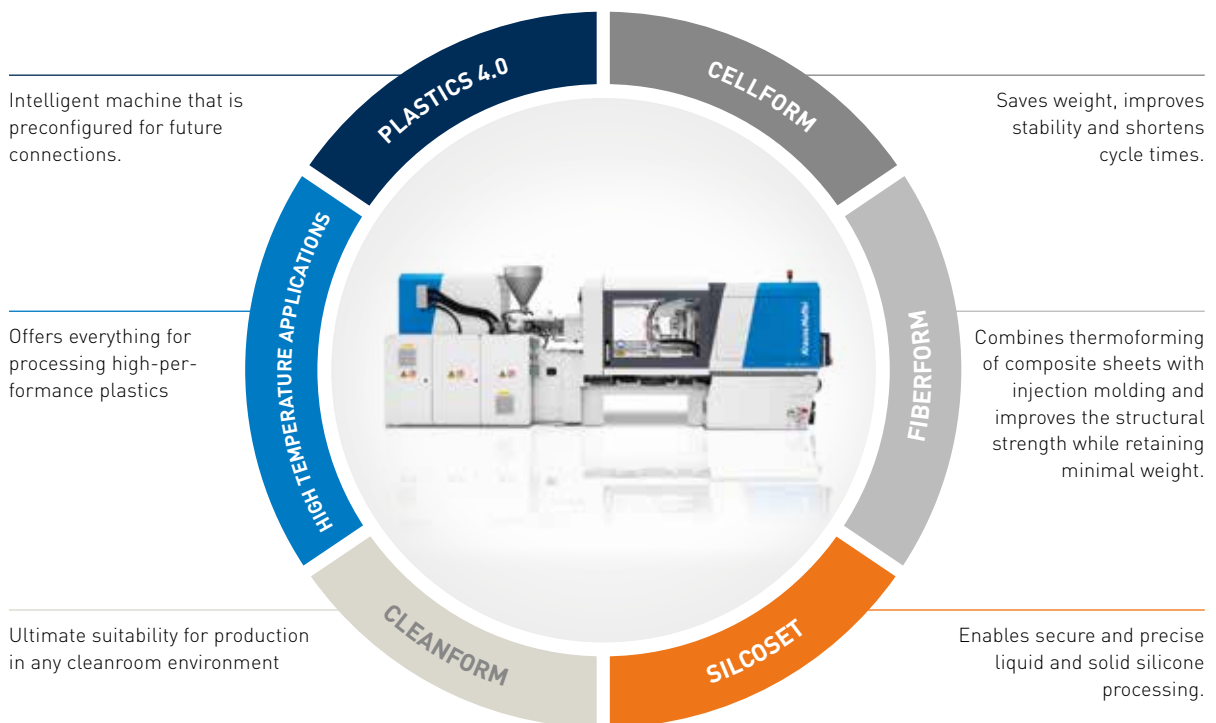
30 percent batch savings: HPS-M screw

Together with the non-return valve, the screw yields the best results. The HPS-M enables a high throughput and guarantees a uniform material, thanks to an excellent mixture. As a result, you can save precious masterbatch. In addition, the scrap rates are lowered and, thanks to the gentle material processing, higher service lives are possible.

YOUR BENEFITS:

- Cutting costs for color masterbatch
- Uniform color distribution in the component
- Up to 20 percent shorter color change times

Set up perfectly for the future: The PX as a basis for all requirements





... or the SPX10 sprue picker...



... or the LRX, there is always an ideal automation solution for the PX.

IDEAL INTERACTION BETWEEN AUTOMATION AND MACHINE PROVEN OVERALL ECONOMIC CONCEPT

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

Stable design

With the SPX10 servomotor-controlled sprue picker, KraussMaffei expands upon diverse automation options and significantly increases user-friendliness compared to pneumatic solutions. Its compact design and stability enable the safe and reliable removal of parts and sprues up to a weight of 1000 g. The servo-drive ensures highly dynamic demolding and precise repeatability, thus conserving energy and resources.

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, pro-

cessing 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 data record and program – an advantage which also considerably increases machine safety.

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.



Superior ergonomics for fast mold changing make the PX perfect for technical applications.

SUPERIOR PRECISION ADVANTAGES FOR TECHNICAL APPLICATIONS

Whether for electronics or for the automotive industry – the high-precision PX is the perfect platform for all technical parts. The focus lies primarily on the following applications: complex geometries, reinforced or flameproof materials, reliable part stability, lightweight construction, surface technologies, functional integration. These industries are also characterized by frequent mold changes.

Strengths of the PX in TEC applications

- Wide range of plasticizing products for technical plastics (flame retardant, fiber-reinforced) with wear-resistance
- Extreme repeatability
- Optimal shot weight consistency (APC plus)
- High holding pressure capacity
- Integration of automation solutions (insertion, removal, stacking, sorting) – all using a singular control system
- Extensive core-pulling function
- Accessibility for easy mold change
- Generous free space below the clamping unit for integrating conveyor belts
- Swiveling injection unit for fast material change (easy maintenance)
- Easy integration of additional technologies (CellForm, Dynamic Mold Heating)

OPTIMAL SPEED ADVANTAGES FOR PACKAGING APPLICATIONS

Short cycle times with maximum part output is the main requirement of the packaging industry. In practice, this means that molds are used with the highest possible number of cavities. This is precisely where the PX shows its strengths. Particularly where high flexibility is required due to small batch sizes and high functional integration. The PX offers the perfect package: It is robust, fast, cost-efficient and flexible.

Strengths of the PX in PAC applications

- Enlarged mold fixing platens for molds with many cavities
- Dynamic clamping unit for short dry cycle time
- High injection speed for thin wall thicknesses
- High plasticizing capacity for high material throughputs
- High ejector speeds
- Parallel movements for short cycle times
- Low energy and water consumption
- Maximum free space for parts logistics under the clamping unit
- High-performance screw (HPS screw) for optimum melt quality with short cycle times
- Special automation solutions for the packaging industry



Thanks to its speed, the PX is the most suitable machine for packaging applications.

SUPERIOR CLEANLINESS ADVANTAGES FOR MEDICAL APPLICATIONS

Applications for medical technology require very high product cleanliness and quality. Even the standard version of the PX is suitable for clean production conditions. Furthermore, the machine can be adapted for use in specific medical industries through additional equipment and retro-fitting options. In this version, belt drives are enclosed, lubrication systems are closed and operation is possible using food-grade NSF H1 oil.

Strengths of the PX in MED applications

- Cleanroom-compliant surfaces in high-gloss and antistatic design
- Grease-free, chrome-plated tiebars
- Automatic central lubrication
- Closed lubrication of the toggle
- Complete encapsulation of all drives
- Removable housing elements for perfect accessibility
- Electric ejector
- Very quiet during operation
- Food-grade NFS-H1 oils
- Machine height setup to facilitate cleaning underneath the machine
- Qualification support



Even the standard version of the PX meets the prerequisites for superior clean production.



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.

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POWER MEETS FLEXIBILITY.

EXPERIENCE OUR ALL-ELECTRIC
INJECTION MOLDING MACHINES
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