

Fast. Precise. Economical. SPX10 sprue picker

Engineering Passion

Krauss Maffei

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The new servo sprue picker from KraussMaffei's automation division features a very compact and stable design. The telescoping stroke makes the SPX10 particularly well suited for use in low shop heights. It forms a unit together with the machine, providing the most flexible solution on the market for use in small spaces. The detached sprue is stored within the standard machine's housing. This means that there is no need for a side extension in the form

of a protective enclosure. This way, four machines can be installed in the same installation area instead of three.

The servomotor enables the sprue picker to operate extremely fast and saves on maintenance time and expensive compressed air compared to wear-prone pneumatic drives. The integration into the MC6 control system and the optimized parking position for mold changing round out the user-friendly features.

The highlights:

- Fast demolding within the standard protective enclosure
 - Stable design, with telescoping stroke specially designed for use at low shop heights
 - Ease of access for mold changing: sprue picker moves into parking position at the touch of a button
 - 15° tiltable Y-axis increases range with large mold opening strokes
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Facts and figures for the standard version

Demolding stroke (X axis)	350 mm
Vertical stroke (Y-axis)	400 mm / 400 mm (telescoping stroke), with motor brake, tilt angle
Transverse axis (B-axis)	130 degrees, rotation axis
Position measuring	Absolute encoder
Payload	< 1000 g
Demolding time	0.75 – 1.2 s
Gripper	Pneumatic function for gripper (gripper with monitor)
Sprue deposit	Sprue chute is integrated into the protective housing
Control system	Integration into the MC6 control system
Programming	Easy programming with the intuitive WizardX programming assistant
CE certification	Completely CE-certified production system



Low and compact design The optimal solution for small spaces

Production space is valuable and limited. Tight space requirements mean there is no room for compromises or less-than-ideal solutions. For example, if the ceiling is too low or components protrude into the room, important installation area is lost. The comprehensive system made up of the SPX10 sprue picker and the new CX Series is our answer for even difficult space conditions.

30 percent less height

The telescoping stroke is an inward-guided rail system which ensures that when the system moves into home position, the total mechanical stroke is reduced by half. This means that unlike fixed axes, the entire stroke does not extend upwards.

Quick demolding

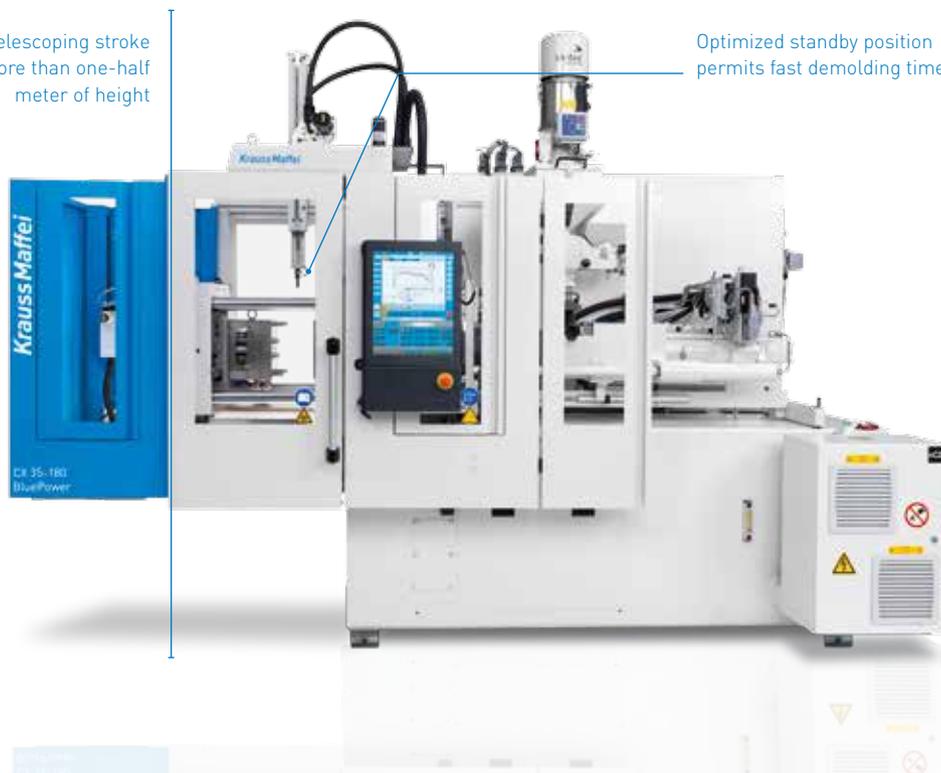
Thanks to the freely configurable waiting position of the gripper, for example just above the mold, the removal time is significantly reduced. Quick machine cycles can be implemented easily.

Your benefits:

- Space savings of approx. 550 mm
 - Quick removal time of just 0.75 - 1.2 s
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The telescoping stroke saves more than one-half meter of height

Optimized standby position permits fast demolding times



Already fully equipped Integrated sprue chute and CE conformity

23 percent lower costs for CE conformity

Safety is an absolute must, not just for manufacturing, and often necessitates additional investment. The complete system from KraussMaffei saves you additional costs, because we provide you with the whole equipment package without any extra charges whatsoever.

Integrated sprue chute

The detached sprue is deposited within the machine housing, on the integrated sprue chute. No side extensions, such as an additional protective housing, are required.



We help you save money

	Commonly available	KraussMaffei
Extension of the protective housing	approx. 200 €	0 €
Installation of the sprue chute	approx. 200 €	0 €
Euromap 67	approx. 350 €	0 €
Euromap 18 to IMM	approx. 350 €	0 €
Euromap 18 adapter plate	approx. 200 €	0 €
Creating the CE conformity	approx. 1.500 €	0 €
Total additional costs for CE	= approx. 2.800 €	= 0 €

Your benefits:

- Approx. €2.800 less investment
- Four machines in the same installation space instead of three
- Complete solution with no need for any additional investment

Clever solution: Sprue is deposited within the protective housing

CE-compliant – Additional safety guard included as standard



The initial investment isn't all that counts We save you money throughout the lifetime of your system

Each investment has to be thoroughly reviewed. A cost analysis including identification of hidden costs helps you make the right investment decision. The SPX10 saves you money several times over and scores big when it comes to cutting operating costs.

99 percent lower costs for compressed air

In manufacturing, even air costs money. Pneumatic axes need compressed air to set them in motion and sometimes lose air due to leaks in lines. The energy-efficient servo drive is driven almost entirely electrically and reduces the consumption of expensive compressed air by more than 99 percent.

20 percent lower costs for compressed air

When it comes to changing molds, obstacles are not only frustrating - they also involve additional cost and set-up time. A pneumatic sprue picker has to be tilted away whenever the mold is changed. This can result in having to readjust the removal position in the mold several times. This results in longer production downtimes and increased workload for personnel. However, the rotary axis moves the SPX10 into a convenient parking position within a matter of seconds. The use of servo axes guarantees that you have an accurate removal point.

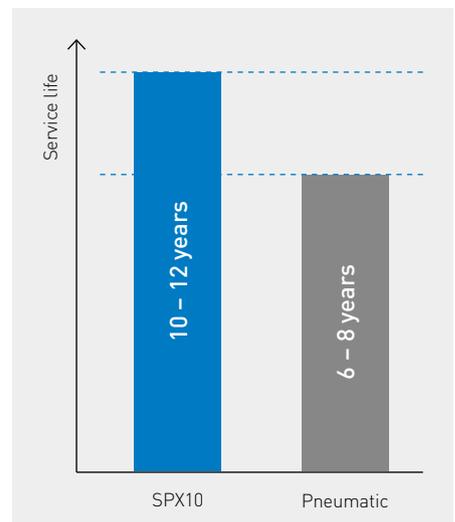
100 percent less maintenance costs

Servomotor-controlled drives are subject to far less wear since, unlike pneumatic drives, the cylinder does not move all the way to the front and back stops and there is no load on fitted components (such as seals). This more gentle operating regime saves routine maintenance and involves fewer production stoppages, thus saving money.

Your benefits:

- Requires less than 1 percent of the compressed air used by a pneumatic drive
- 85 percent energy savings
- Fast and easy mold changing
- No prescribed maintenance intervals
- Reduced labor costs

Rotary axis creates space
for mold changing.



Pays for itself after two years

The key to cost-effective demolding

Precise demolding and reproducibility

For design reasons, pneumatic systems vibrate when they come to an abrupt stop at their limit positions. Accurate demolding cannot take place until the gripper has stabilized. This delay can result in longer cycle times. Thanks to acceleration and braking ramps, the SPX10 offers vibration-free demolding and the servomotor guarantees a positioning accuracy of less than 0.1 mm.

Long service life

Pneumatic drives place severe strain on lines and joints. They have to withstand pressure build-up and maximum stroke travel over years. Experience has shown that despite regular maintenance, the equipment has to be replaced within about six years. This means that you have to invest in new equipment after only six years. The servomotor-controlled drive concept saves wear and tear on maintenance-intensive components and guarantees a long service life.

Your benefits:

- Very good reproducibility for fast commissioning
- Shorter cycle times
- Service life of at least up to ten years
- Lower service costs



Vibration-free demolding makes for faster cycle times

Avoid additional costs

	1	2	3	4	5
	No costs			High costs	
Compressed air					
Maintenance					
Replacement after 6 years					
Mold changing					
Additional costs due to lower machine utilization (limitation of cycle time)					

● KraussMaffei SPX10

● Pneumatic sprue picker

Cost comparison based on a CX 110

The following assumptions were made:

- Cycle time: 20 seconds
- Utilization: three-shift operation
- Travel path: 900 mm



Amortization period of 2 years, corresponds to €15,000 in savings over a 6-year period



The one-of-a-kind inclined position of the Y-axis provides flexibility across the full range of clamping forces - regardless which product you are demolding.



With the optimal gripper module, the SPX10 can demold and deposit even small parts using vacuum.

From sprue picker to pick-and-place device Easy conversion makes it possible

Optional: Pick-and-place expansion

If necessary, the SPX10 can also be converted to a small pick-and-place device and thus offers maximum production flexibility. Optional conveyor belts can be fitted into the protective paneling, thus enabling placement within the enclosure. You not only benefit from a flexible and highly space-saving solution, you also save the cost of purchasing a small handling robot.

Your benefits:

- Flexible application and production options
- Space-saving part placement saves installation area

Scope of delivery of the SPX10

Angle of vertical stroke can be adjusted for different mold types

Sprue chute fitted into nozzle protective paneling on the operator rear side

Open nozzle protection on operator rear side

Adaptation of machine paneling (deviating technical data)

Integration of the machine control system with interactive programming wizard

RAL 9002 standard paint finish

Scope of delivery of the SPX10 expansion pack

2x pneumatic circuits with gripper

2x Venturi circuits for generating a vacuum with vacuum monitoring

Gripper change plate and gripper module



Production cell geared up for ideal efficiency.

Conceived as a system solution Everything from a single source – perfectly co-ordinated

Easy programming

The greater the variety of control systems and operating philosophies are introduced into a production system, the more complicated operation becomes and the more time is wasted. The SPX10 is fully integrated into the MC6 control system. The operating language and philosophy remain the same. The WizardX ensures maximum ease of programming – just press a button and the picker is programmed.

One supplier for everything

At KraussMaffei, we are systems thinkers. This approach, combined with long-time experience in complex automation solutions, guarantees that you have production cells perfectly tailored to one another. Interface, protective housing, CE conformity or all-in-one control system – everything comes ready to use and custom-built to your requirements.

Your benefits:

- Easy programming with WizardX
- Only one data record has to be integrated into the MC6 control system
- One contact for automation and injection molding machine



With WizardX, programming the SPX10 could not be easier.

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The compact SPX10 sprue picker is highly energy efficient, dynamic and features short operating times, all thanks to the servomotor-controlled drives on each of its axes. As the only one of its kind on the market, the SPX10 has a Y-axis that can be tilted 15°, which gives it extra range for longer mold opening strokes.

For maximum convenience, the SPX10 is fully integrated into the MC6 machine control system and can be programmed intuitively using the custom-adapted WizardX.

Benefit from our experience as a system provider for machines, technology and automation.