

7X LINE

5-Axis Robots

- 7X-45
- 7X-55
- 7X-100XL



Milacron is the specialist in the automation of 700 to 5000 T injection molding machines

Our large robots offer is designed around a unique technological platform of the latest generation to meet the most varied production requirements, such as yours

From the 3-axis robot to the 5-axis robot, there is a solution for all your new or existing press equipment needs, for simple unloading or complex applications or for optimum adaptation to the most demanding applications

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YOUR FREE CHOICE IN **BIG** ROBOTS

For 700 to 5000 ton
Injection Molding Machines

TECHNOLOGY

7X Line benefit from the latest generation technologies of the new Milacron large capacity robot platform:

- A high level of component reliability due to shared designs and components with high technological value: Milacron Linear System (SLS) guides on transverse and vertical axes and powerful servo-motors on all our models.
- Rationalization of basic components and a modular design for adapting the installation (transverse or axial, etc.), with strokes and loads tailored closely to your application needs.
- A modular assembly planned during the design phase for demolding and vertical arm functions which allow for pre-assembly in our factory and testing by module.
- Robot programming and operation is simple and flexible using Visual, Milacron's native control platform.

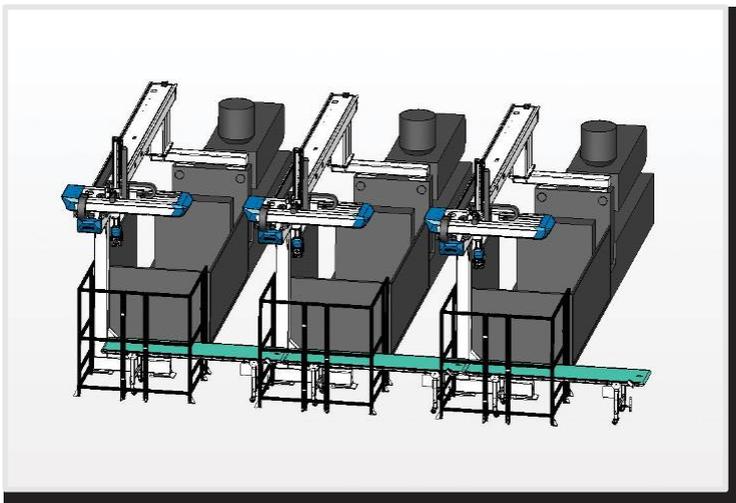
DESIGN AND STRENGTH

In terms of the design, 7X Line robots are stable and fast in order to optimize installation productivity during operation, 24/7.

- A vertical arm with aluminum profiles, provides an Excellent mass/rigidity ratio and design optimized for high performance.
With no balancing cylinder, due to the intelligent servo control and brake, this design reduces noise, maintenance operations and power consumption (compressed air and electricity).
- 7X-55 robots have a closed frame demolding structure made of aluminum profiles for high rigidity and low moving masses.
7X-100 XL have a single-beam, large section demolding structure to ensure stability and a long demolding stroke. For the demolding axis, the prismatic guide represents the optimal cost/rigidity solution.

AXIAL INSTALLATION

The choice of an axial installation on the large IMM optimizes the use of available floor space in your workshop:



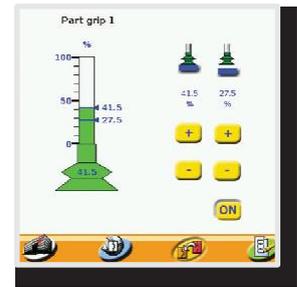
- Three IMMs instead of two over the same floor area (50% more IMM on average)
- The flow of parts is directly at the end of the IMM: no need for a conveyor between the IMMs.
- The available space between the IMMs is reserved for operator access and preparing the molds for a quick change of production.

VISUAL 3

The assurance of high performance and simplicity

A perfect solution for the most complex automation systems with up to 16 axes.

- The standard Path Tracking function, as standard, can be used to demold undercut parts following curved paths, flame treat parts or cut sprues using simple, economical tooling systems.
- Thanks to the fast 20 ms PLC function; you can check intelligent peripheral systems, such as a camera to determine the position of a part, as well as external CNC axes.
- Use the Software studio on your PC to create, edit and manage your programs in a Windows environment. The robot's programs and data can be centralized via your company's IT network (TCP/IP Ethernet cable or Wi-Fi as an option).
- The Digital vacuum switch is available as standard on Visual 3 to program and save your part grip settings for each mold.





A RANGE OF LARGE 5-AXIS SERVO ROBOTS, FOR INCREASED POWER AND FLEXIBILITY

7X Line 5-axis robots are a powerful combination of a 3-axis Cartesian robot and an accurate and reliable dual Staubli Servo-rotation.

Milacron is expanding the robotic range in the plastics industry with a unique and original combination ranging from a 3-axis Cartesian robot to a 5-axis robot, to equip large tonnage injection molding machines.



The Staubli servo wrist

The 2-axes compact servo rotations guarantee high precision, high speeds and can be easily adapted to even the most elaborate applications: insert placing, complex extraction paths in the mold, path tracking for flame treatment.

Powerful servo-motors and also has the flexibility of a polyarticulated robot wrist.

This hybrid configuration facilitates very precise settings to meet all the specific requirements of injection molding.

Robot programming and operation is made easy using Visual 3.

Accurate part gripping and stacking

Gripping and stacking swivel operations can be finely adjusted and stored in the memory for each application, while retaining a simple EOAT unit design.

Complex applications on large injection molding machines

Stäubli high-torque servo rotations allow for heavy-duty and complex EOAT units. The Staubli wrist design has been tested and standardized for high-level performance (speed up to 270/s and accuracy and repeatability up to +/- 0.01°).

Path tracking

7X Line robots can process even the most specific applications, such as the complex extraction of parts from the mold or flame treatment beside the IMM. Path tracking is available as standard with Visual 3.



For over 30 years, Milacron has been selling Cartesian robots for the plastics industry worldwide.

Milacron strives constantly to develop a fully global offer to answer the needs of the world's plastic industry market.

Staubli is an innovative Swiss group specialized in 3 main sectors, whose common feature is mechatronics: fabric machines, connection systems and robotics. Staubli robots are designed and manufactured in France and

Used in industries such as plastics, automotive, machine tools, medical or food processing and cover all types of applications.

MILACRON AND STÄUBLI SHARE THE SAME, MAIN VALUES:

- Customer satisfaction,
- Quality of marketed products,
- Technological advance,
- Local customer service worldwide.

Availability 2016

	7X-45	7X-55	7X-100 X
Mold clamping force - Indication (metric Tons)	700-1300	1200-2500	2300-5000
Mold clamping force - Indication (US tons)	772-1433	1323-2756	2535-5512
Horizontal stroke (Can be adapted by 500 mm steps) (mm)	3000-10000	3500-10000	4000-10000
Maximum instantaneous speed (m/s)	3	2,5	2
Demold stroke - Transverse layout (mm)	1100	1500	2000
Maximum instantaneous speed (m/s)	2,5	2	1,8
Vertical telescopic arm	✓	✓	
Vertical telescopic compact arm			✓
Vertical stroke (mm)	2200	2500	3600
Maximum instantaneous speed (m/s)	3	3	3
Maximum load (parts + EOAT) (kg)	40	60	100
R1 servo rotation (0 -180°) + R2 (0-270°)	✓		✓
Part grip - Vacuum and/or pressure circuit (more as option)	1	1	1
Digital vacuum switch	✓	✓	✓
Floor-standing control cabinet	✓	✓	✓
VISUAL 3 control system			
OPTIONS			
Vertical telescopic compact arm	✓	✓	
Vertical stroke (mm)	2200	2500	
Maximum instantaneous speed (m/s)	3	3	
Maximum load (parts + EOAT) (kg)	40	60	

