

## A6-CNC axis robots - Yaskawa

For IMM from 20T to 5000 T



Sepro is innovating and offering a 6-axis robots:

The **Sepro-Yaskawa** range for equipping IMM from 20 to 5000 T

The Visual control platform allows easy and equal programming of 3, 5 or 6-axis robots and provides access to Sepro Service worldwide.

The Visual control of 6X robots can be implemented in the control system of the injection molding machines from manufacturers who cooperate with Sepro by means of Agile Integration.



- 6X-70.2
- 6X-270.2
- 6X-140.2
- 6X-315.2
- 6X-170.2
- 6X-400
- 6X-205.2



# EXPERIENCE FULL CONTROL

## POLYARTICULATED 6-AXIS ROBOT OR CARTESIAN 5-AXIS ROBOT, THE CHOICE OF ADDITIONAL ROBOT FOR ALL SIZES OF INJECTION MOLDING MACHINES

6X Visual is a range of polyarticulated robots with 6 CNC axes that are simple to program thanks to Visual 3, especially designed for all your injection molding applications.

5X Line and 7X Line are Cartesian robots with 5 CNC axes made for complex applications and are easily operated with Visual 3. The 5-axis robots are Sepro design and equipped with R1 + R2 rotation from the Stäubli 6-axis robots.

Sepro is expanding the range of robotics in the plastics industry with original and unique alliances that offer a winning choice by proposing two additional 6X Visual ranges:

- With Stäubli polyarticulated robots for equipping 20 to 1300 tonne injection molding machines and marketed under the Sepro-Stäubli brand.
- With Yaskawa Motoman polyarticulated robots for equipping 20 to 5000 tonne injection molding machines and marketed under the Sepro-Yaskawa brand.



## THE POWER OF A 6-AXIS POLYARTICULATED ARM AND THE SEPRO VISUAL 3 CONTROL PLATFORM

6X VISUAL is the power of a 6-axis polyarticulated arm and the Sepro Visual 3 control platform. 6X Visual are 6-axis polyarticulated robots, designed to equip your injection molding machines and/or post processing parts outside of the IMM.

6X Visual are 7 sizes of versatile robots to meet the specific needs of the plastics industry.

For simple unloading or complex path tracking applications, implementing the polyarticulated 6-axis is as easy and quick as for a 3-axis, thanks to the power and ease of Visual 3.

These robots are used for unloading directly from the IMM or on peripherals for post processing of plastic parts.

## SEPRO INTEGRATION

Sepro-Yaskawa 6X Visual robots have Sepro plug and play integration with the Visual 3. Vacuum and pressurized pneumatic circuits and digital inputs and outputs are available on the end of arm connectors.

The EUROMAP 67 interface is standard. A fast mechanical Sepro interface is offered as an option.

Integrated in automation projects by the Solution by Sepro team, 6X Visual robots enable expansion of the perimeter of automation around injection molding machines.



## 6X AND VISUAL 3, THE PERFECT COMBINATION FOR A UNIVERSAL, AUTOMATION SOLUTION

- The speed and precision of 6-axis articulated arms for the most complex applications.
- Easy programming and use thanks to the Visual 3 control system.
- For Sepro customers already familiar with the Visual environment, a short training course is sufficient to use an installation with a polyarticulated robot from the 6X Visual range.



## THE ASSURANCE OF HIGH PERFORMANCE AND SIMPLICITY!



### High Performance

The standard Path Tracking function can be used to demold undercut parts following curved paths, or flame treat parts.

Thanks to the fast 20 ms PLC function, you can check intelligent peripheral systems, including external CNC axes.

Use the Software pack on your PC to create, edit and manage your programs in a Windows environment. 

The Digital vacuum switch is available as standard on Visual 3 to program and save your part grip settings for each mold.



### Really Simple - It's so easy

- See what you're creating in 3D: with the Simple Pick-and-Place module, create your cycle by answering the questions the system asks you and see the result immediately in 3D on the video.
- When fine-tuning, the Joystick makes delicate settings in the mold possible.

### Make your daily routine easier

Consult the online documentation in full screen mode at any time.

Transfer information from one team to another using the notepad function.

Thanks to the USB key, operators, setters, programmers and maintenance staff have direct access to the relevant data. 

Troubleshooting assistance from Sepro's Hotline: with the USB key, download and send the relevant information via internet for remote assistance.

SEPRO-YASKAWA - THE TECHNOLOGY OF A WORLD LEADER

6X-70.2 - 6X-140.2 - 6X-170.2 - 6X-205.2 - 6X-270.2 - 6X-315.2 - 6X-400

.2 ROBOTS ARE EQUIPPED WITH A NEW COMPACT CONTROL CABINET



6X-70.2 — 6X-70.2 L — 6X-140.2 — 6X-170.2 — 6X-205.2 — 6X-205.2 L

Mold clamping force - Indication metric Ton

6X-70.2

6X-140.2

20 - 200

80 - 200

22 - 220

88 - 220

Version

Maximum load (kg)

Nominal load (kg)

Radius of action (mm)

Repeatability (ISO9283)

Protection category (\*wrist)

Work zone (°) / Max speed (°/s)

Axis 1

Axis 2

Axis 3

Axis 4

Axis 5

Axis 6

Type of installation

Side Entry Ground

Side Entry Ceiling (1)

Top Entry (on IMM's fixed plate)

Floor-standing control cabinet

Path tracking

VISUAL 3 control system

6X-70.2

6X-70.2 L

6X-140.2

8

7

12

8

7

12

727

927

1440

+/- 0,02

+/- 0,03

+/- 0,08

IP67

IP54/IP67

+/-170 | 455

+/-170 | 375

+/-170 | 260

-65/+145 | 385

-65/+145 | 315

-90/+155 | 230

-113/+255 | 520

-116/+255 | 410

-85/+155 | 260

+/-190 | 550

+/-200 | 470

+/-135 | 550

+/-150 | 470

+/-360 | 1000

+/-455 | 700

✓

✓

✓

✓

✓

✓

✓

✓

✓

✓

(1) Contact Sepro

(2) Correspondance  
Yaskawa axis  
Axis 1 = S  
Axis 2 = L  
Axis 3 = U  
Axis 4 = R  
Axis 5 = B  
Axis 6 = T

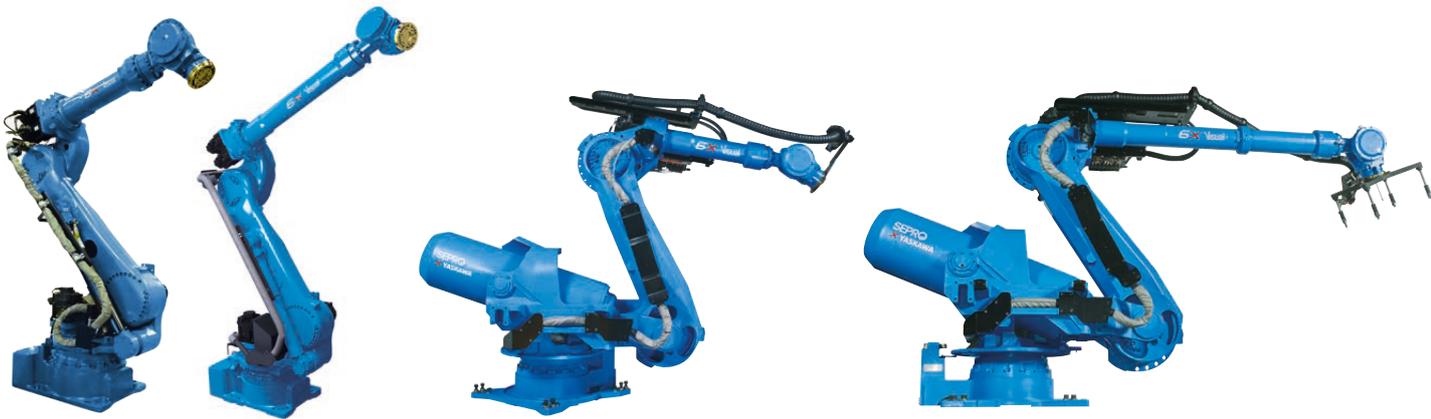
The small 6-axis robots (6X-70, 6X-140 & 6X-170) ideally combine quality and durability at the best price to satisfy the requirements of general automobile applications.

The large-sized arms (from 6X-205 to 6X-400) are specially adapted to offer a large work envelope and wide radius of action for IMMs up to 5000 tonnes.

They can be mounted either on the IMM platen to save floor space, or next to the IMM on the floor, to work with the peripherals.

The slender architecture of the end of arm, combined with powerful motors make Yaskawa-Motoman robots highly adapted to handle large EOATs inside the molds.

Yaskawa programming functionalities can be available as an option for certain complex automation applications.



6X-270.2 — 6X-270.2 L — 6X-315.2 — 6X-400

### 6X-170.2

150 - 500

165 - 551

6X-170.2
25
25
1730
+/-0,06
IP54 / IP67
+/-180   210
-105/+155   210
-86/+160   265
+/-200   420
+/-150   420
+/-455   885
✓
✓
✓
✓
✓

### 6X-205.2

500 - 1000

551 - 1433

6X-205.2	6X-205.2 L
50	35
50	35
2061	2538
+/-0,07	
IP54 / IP67	
+/-180   180	
-90/+135   178	-90/+135   140
-80/+206   178	
+/-360   250	
+/-125   250	
+/-360   360	
✓	✓
	✓
✓	
✓	
✓	

### 6X-270.2

800 - 2000

882 - 2204

6X-270.2	6X-270.2 L
180	120
180	120
2702	3058
+/-0,02	
IP54 / IP67	
+/-180   125	
-60/+76   115	
-86/+90   125	
+/-360   182	
+/-130   175	
+/-360   265	
✓	
✓	
✓	
✓	
✓	

### 6X-315.2

1000 - 2000

1102 - 2204

6X-315.2
165
165
3140
+/-0,2
IP54 / IP67
+/-180   105
-130/+80   105
-112/+208   105
+/-360   175
+/-130   150
+/-360   240
✓
✓
✓
✓
✓

### 6X-400

1500 - 5000

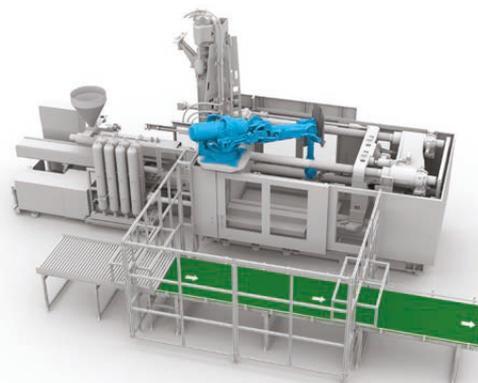
1653 - 5512

6X-400
120
120
4004
+/-0,2
IP54 / IP67
+/-180   90
-130/+80   85
-107/+190   85
+/-360   175
+/-130   150
+/-360   240
✓
✓
✓
✓
✓

## INSTALLATION ADAPTED TO YOUR SPECIFIC NEEDS

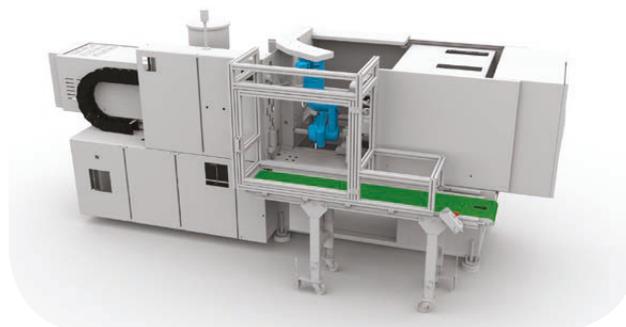
### INSTALLATION ON THE IMM'S FIXED PLATEN - TOP ENTRY

- No floor area is occupied by the robot
- Enables IMM operation with the doors closed



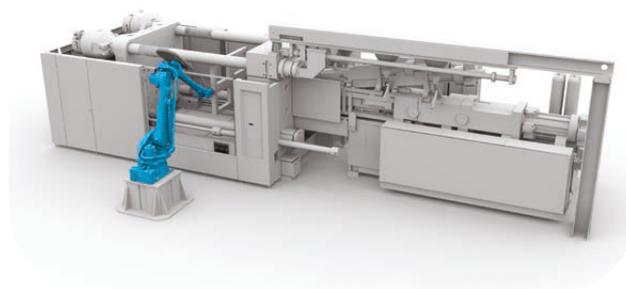
### CEILING INSTALLATION - SIDE ENTRY

- Very compact installation integrated in the IMM
- Laminar flow above the mold and easy to install



### FLOOR INSTALLATION - SIDE ENTRY

- Wide work zone for the robot, near the floor for serving the peripheral units.



## WHY CHOOSE SEPRO ?

- Sepro manufacturer n°1 in Europe - Major performer in North and South America
- Main supplier for the Automotive, Medical and Packaging industries in Europe and the USA
- A full line of robots from 3 to 6 axis with a smart and user-friendly control
- Over 40,000 installations worldwide