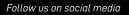






GENERAL CATALOG (EN











## Pioneers in the field of industrial automation

Campetella Robotic Center: the story of an Italian industrial robot manufacturer that stands out in robotics design, production and applications

We are an Italian company specialized in the design and production of Cartesian robots and manipulators.

We boast a centuries-old history that crosses the Industrial Revolution and involves five generations of the Campetella family. At the beginning, we accompanied hundreds of entrepreneurs along the path where craftsmanship turned into industry. A lot has happened since then: today Campetella Robotic Center is a leading company focused on mechanical designs and realizations which, at the same time, also takes care of software engineering, plant installation and maintenance and robots' sales and after-sales service. Our core business lies in finding robotic solutions for the plastic injection moulding sector. The solid experience we have been gaining over time has led us to be chosen by the major national and international industrial groups who ask us to meet their production needs.













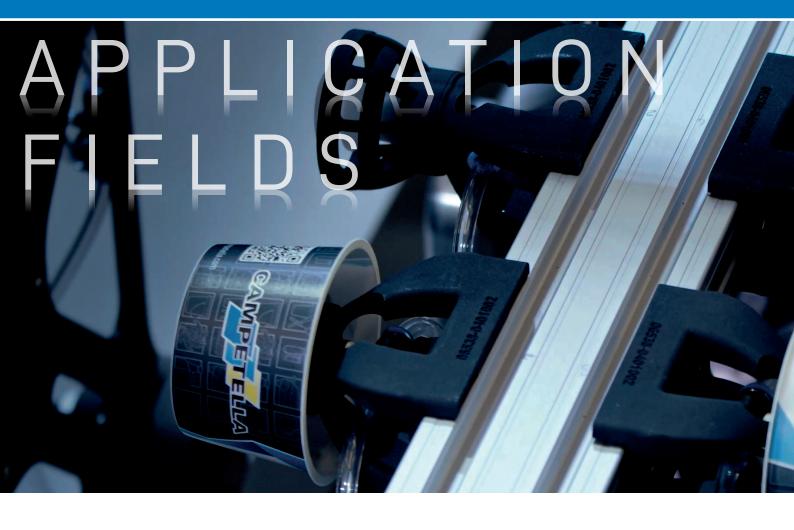




Scara robots

Cartesian side entry robots

Stack mold robots



## **APPLICATION FIELDS**

The automation solutions proposed by Campetella are specifically designed for satisfying the needs of companies operating in various fields, including the automotive, packaging, technical moulding, PET preforms, medical and disposable cutlery sectors.

## Packaging



Our integrated systems for the production of packaging combine maximum flexibility with high performances.

High reliability, efficiency and configurability are the common strands uniting all our technologies, which include IML labelling, quality control, boxing, palletising, logistics and handling.

# Medical and pharmaceutical industry



Our fully automatic lines, used for functions that include take-out, boxing and the artificial vision

system, guarantee conformity to the most rigorous quality and hygiene standards required for the production of medical and pharmaceutical items to safeguard human health.

## Closure



Millions of caps and closures are used daily on countless everyday household items, from beverages to products

for cleaning the home. Campetella manufactures automation systems that ensure the highest productivity in accordance with the most rigorous quality standards, from rapid takeout to automated capsule assembly islands.

## **Automotive**



The automotive industry requires flexibility now more than ever to satisfy an increasingly fluctuating demand.

Campetella guarantees high quality standards and lower cycle times for all operations involving picking and placing, inserting, palletising, IMD, flaming, quality control, logistics and handling.



## Crates, pallets and bins



We offer state-ofthe-art automation systems for handling, IML, direct assembly, palletising, decoration

and labelling, quality control, logistics and handling of crates – folding or to be assembled – pallets and bins used for distributing industrial products, fruit and vegetables and foodstuffs in general.

# Disposable Cutlery& Dishes



Our innovative automation system centred on sustainability shows that plastic and environmental protection can be

tangibly compatible. We are at your service to help you in operations involving rapid take-out, packing, IML, boxing, palletising and quality control of disposable cutlery and dishes, which have always been associated with maximum hygiene and food safety.

## Houseware products



Our Cartesian robots guarantee the most careful handling of decorative parts, from containers for the

home to furnishing elements with a sophisticated design. We propose solutions with IML for resistant and attractive decorations, islands used for mounting assembled items, and automated packing, boxing and palletising systems.

## Technical molding



The complex shapes of components made through technical moulding require the use of increasingly

advanced automation systems for accurate take-out, decoration, labelling, boxing, palletising, flaming, quality control and handling of the most elaborate technical details.

## **Appliances**



Maximum quality at a limited cost for creating innovative, technologically advanced and high-

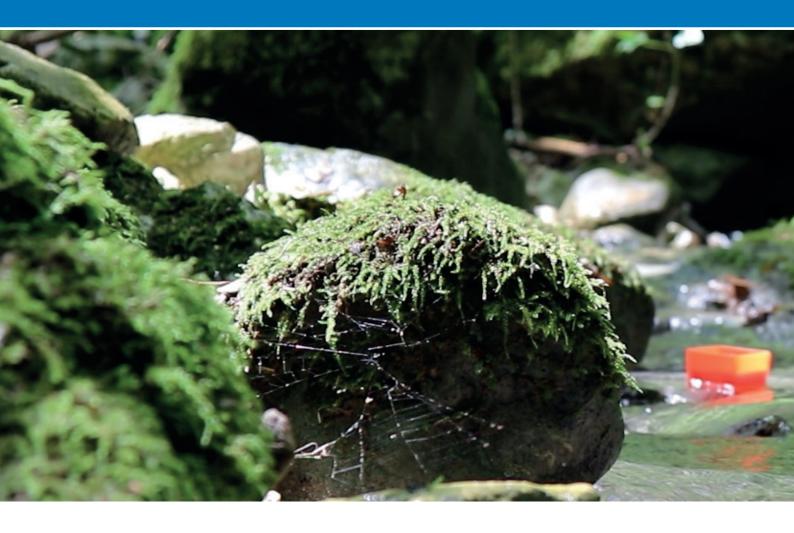
performance household appliances. Picking and placing, palletising islands, vision systems for quality control, inserting and IMD technology are just a few of the possible applications we propose in this sector.

## PET preforms



From rapid takeout to boxing, speed is undoubtedly the distinguishing feature of our robots used for

PET preform moulding operations. This is an extremely versatile material used to manufacture items for various sectors, such as the food processing and cosmetics industries.



## THE RIGHT WAY TO SAVE ENERGY

Innovation and environmental sustainability are two sides of the same coin and Campetella pursues them both, by intervening as early as the design stage to improve performances while reducing consumption. This is achieved also through the recovery and reuse of product components that have reached the end of their useful life.

We are highly attached to our territory and have always been committed to protecting it by preventing any form of pollution. Each day we choose to contribute to the well-being of our community by adopting sustainable procedures and behaviours for preventing air, water and land pollution, starting from proper waste disposal.

## Dynamic vacuum

#### Reduction compressed of consumption

Dynamic air management system used for retention of parts. Compressed air consumption reduced by 60% compared to traditional vacuum systems

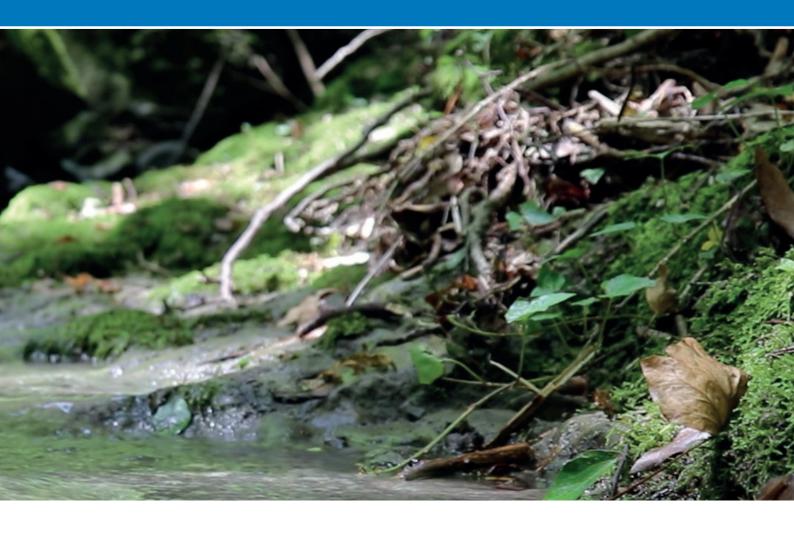


"Campetella Robotic Center: advanced technologies for sustainable company competitiveness".

## Float balanced axis

## Reduction of electricity consumption Pneumatic balancing of the vertical

axis that limits the use of electricity. Consumption reduced by 40% compared to non-assisted vertical axes



## Vacuum optimizer system

#### Reduction of compressed consumption

Inlet ejector flow management. Energy savings of 25% compared to systems with unmanaged flow

# Jog over

#### Reduction in consumption electricity and compressed air

Optimization of robot cycle out of the IMM. Electricity and compressed air consumption saving of 10% compared to non-optimized cycles

## Kers

## Reduction of electricity consumption

The energy generated by the braking axes is recovered and used to drive the next moving axes. Savings of 10% on the energy used for the movement of the axes

# High speed interface

## Reduction of cycle time

H.S.I. interface for management of applicationsthatrequireextremelylow cycle times. Optimized installed power

## 3D printing device

## Weight reduction and raw material saving

Mechanical components and gripping devices made with 3D printers reduce use of raw materials

# Carbon technology

## Weight reduction and consumption

Carbon fiber guarantees excellent results in terms of intervention times, lowcomponentwearandhighprecision



### Safety first and foremost

In case of sudden danger, the emergency button causes the robot and IMM to stop, safeguarding the operator's safety.

## **Optimal visibility**

The 4.3 "TFT color display and backlit keys allow for immediate visual clarity

### Practical, comfortable and interconnected

The USB ensures an easy and fast sharing of the work programs among the various robots, full dialogue between console and pc, prompt data saving.

Besides, it facilitates software updates and backup / restore of all the robot's memory, as well as a total interconnection between robots and companies' networks through the "industry 4.0" kit



## ..Maximum protection

The safety key enables the rear dead man's switch, preventing the automatic operation of the robot and ensuring its stop in dangerous situations

## **Programming at your fingertips**

The practical selection knob allows to set the desired value with a simple and comfortable rotation

## **Elegant, light and resistant**

The carbon fiber body shell guarantees lightness and strength simultaneously, combining extraordinary handling with an innovative and captivating design

## Campetella's control unit for industrial robots

For those who focus on substance, Prime is the robot control unit that was developed specifically to offer high functionalities with the maximum quality-price ratio.

Prime blends advanced technology and a high level of integration, ensuring compactness, practicality and reliability. By adopting minimalistic design and top-quality materials, the unit provides the robot with enviable performances at accessible prices.



### All the advantages of simplicity: Prime Console

Living in close contact with the industrial reality of our clients, we understand how practicality is of primary importance at a production plant.

We have therefore conceived a console that is extremely compact and light, yet also sturdy and functional. A resistant carbon fibre structure is home to the 4.3" TFT colour display, useful for for the clear visualisation in real time of the robot's parameters. The input devices are exclusively physical, with back lighted keys and a knob for quick navigation between the menus, to be immediately used in the production area. The console is also equipped with a USB port that can be used to back up the programs and to update Campetella's software, which are continuously developed with new functionality.



## Maximum hardware integration

### for high performances with reduced costs

The Prime unit is equipped with a CPU made with a modern architecture, that can manage with maximum fluidity the graphic interface and the simultaneous control of the robot's brushless servo motors. This solution, highly integrated and with low power consumption, characterises a control system that focuses on the maximisation of the performances, with reduced costs. The internal storage capacity of the system allows for the memorisation of 99 different programs, which can also be saved on an outer flash drive.



### Guaranteed connectivity to external peripherals

Although in a more limited number when compared with the more evolved EVO control, the Prime unit allows for the management of external digital signals and for the controlling of the main peripherals external to the robot, such as conveyor belts and user



### Always one step ahead: Campetella Industry 4.0

The control of production data and information has been taking an increasingly important role, allowing for the creation of new business models with higher levels of productivity and quality. The Prime control unit can be equipped with the Campetella I4.0 kit, consisting of a router and software dedicated to the monitoring and the exchange of information back and forth b etween the robot and the remote PC.



### Prime software programmability

Inheriting the main functionalities developed at the EVO top-of-range console, the Prime software includes everything that is needed for the rapid and refined making of pick-up and drop-down and of palletisation programs. Based on a series of simple and intuitve ready-to-use functions, organised in a large library, robot management requires no particular knowledge. Your operators will soon be able to edit and optimise the robot's cycles in full autonomy, saving up to the last hundredth of second.



## Campetella Service diagnostics and remote assistance

The Prime control is equipped with a self-diagnostic system, with reporting of possible errors. For any other request of support, it is always possible to back up the entire status of the robot in a flash drive and send it to our Campetella Service team for an accurate analysis.



## Environmental protection and power saving

We respect our planet. The Prime intelligent hardware and software package allows for a significant optimisation of power consumption. Worthy of mention are:

**KERS Technology:** the particular architecture of the drives that are mutually connected allows for the recovery of the kinetic energy of the braking axes, leaving it available for the other axes that are in motion.

**Dynamic Vacuum:** Dynamic vacuum management system for the retaining of the parts, reducing compressed air consumption **Jog Over:** Optimisation of robot cycles out of IMM, automatically reducing its speed and consumption without any impact on the overall cycle time.



### **Maximum protection**

The safety key enables the rear dead man's switch, preventing the automatic operation of the robot and ensuring its stop in dangerous situations

## Practical, comfortable and interconnected

The USB ensures an easy and fast sharing of the work programs among the various robots, full dialogue between console and pc, prompt data saving.

Besides, it facilitates software updates and backup / restore of all the robot's memory, as well as a total interconnection between robots and companies' networks through the "industry 4.0" kit

## Optimal visibility and high accessibility

The robust 7 "high-resolution tft touch screen display allows immediate visual clarity, facilitating programming



## Safety first and foremost

In case of sudden danger, the emergency button causes the robot and IMM to stop, safeguarding the operator's safety.

## Functionality at your fingertips

The practical and physical keyboard with buttons dedicated to controlling the main functions of the robot is designed to simplify the continuous adjustment and programming operations

## Elegant, light and resistant

The ABS body shell guarantees lightness and strength simultaneously, combining extraordinary handling with an innovative and captivating design

## 10

## Campetella's control unit for industrial robots

The result of decades of non-stop evolution, EVO represents the maximum expression of Campetella's know-how in the development of controllers for industrial robots.

Featuring latest-generation hardware and software, EVO ensures the highest level of performances, functionalities and control in our robots belonging to the X-Series and E-Series robots.

The EVO platform is transversal to all the architectures of Campetella robots, from the Cartesian to the SCARA: the simplicity of a single language that can be used to manage countless applications.



### **Evolution of the man-machine interaction: EVO console**

A simple and immediate dialogue with the robot is the foundation of a more practical, satisfying experience. Our deep knowledge of our clients' needs has allowed us to develop a man-machine interface that is extremely clear and intuitive. This portable console is light and ergonomic, and hosts a high-resolution 7" TFT touch screen to display all of the robot's parameters in real time. It is accompanied by a physical keyboard with buttons dedicated to the control of the robot's main functions, always practical in industrial settings. The console is also equipped with a USB port that can be used to back up the programs and to update Campetella's software, which are continuously developed with new functionality



### The most advanced hardware of interpolated axes control

The brain of the EVO unit is an industrial motion controller characterised by a powerful micro processor that can manage up to 32 interpolated axes, piloted through the modern Ethercat field bus. This system allows for instantaneous exchange of information with the drives of the brushless servo motors, so that the robot can carry out the most articulated trajectories and multi-tasking functions without any latency. The calculation power accompanies a high storage capacity, useful to save countless robot programs



## Maximum connectivity to external peripherals

The control is equipped with numerous communication interfaces with sensors and peripherals external to the robot, highly scalable with additional I/O boards and perfectly controllable through the EVO console.



### Always one step ahead: Campetella Industry 4.0

The control of production data and information has been taking an increasingly important role, allowing for the creation of new business models with higher levels of productivity and quality. The EVO control unit can be equipped with the Campetella I4.0 kit, consisting of a router and software dedicated to the monitoring and the exchange of information back and forth b etween the robot and the remote PC.



### EVO software programmability

For years we have been developing the EVO software to make the most complex automation processes. Increasingly richer with functions that are ready to use, organised by a large library, the programming of the robot is quick to comprehend and simple to apply. The creation of classic pick-up and drop-down cycles is practically immediate, thanks to the presence of a wizard complete with useful graphic animations. Much more advanced programs can be made with the powerful editor, also intuitive and with self-learning functions. Your operators will soon be able to edit and optimise the robot's cycles in full autonomy, saving up to the last hundredth of second.



### Campetella Service self-monitoring and remote assistance

The EVO controller allows for maximum performance, and yet has the health of the robot at heart. Based on the cycles and kilometres run, constantly under monitoring, it will punctually inform you on the need to carry out maintenance interventions in order to extend the machine's life. Any anomalies that may occur are immediately detected by a self-diagnosis system, and the most common error codes are always reported. For any other request of support, it is always possible to back up the entire status of the robot in a flash drive and send it to our Campetella Service team.



## Environmental protection and power saving

We respect our planet. The EVO intelligent hardware and software package allows for a significant optimisation of power consumption. Worthy of mention are:

- **KERS Technology:** the particular architecture of the drives that are mutually connected allows for the recovery of the kinetic energy of the braking axes, leaving it available for the other axes that are in motion.
- **Dynamic Vacuum:** Dynamic vacuum management system for the retaining of the parts, reducing compressed air consumption
- **Jog Over:** Optimisation of robot cycles out of IMM, automatically reducing its speed and consumption without any impact on the overall cycle time.



## Fast and reliable robots for sprues picking in injection molding

The sprue picker robots are manipulators designed for sprues picking in injection molding.

Available with both Cartesian and rotary architecture, depending on the specific application needs, all Campetella sprue pickers boast fast and reliable electric servo drives that require minimal maintenance.

Campetella sprue pickers are exclusively available in Prime Series and are designed to offer all the basic functions with maximum accuracy and ease of use.









Prime Series: dedicated to small-sized, simple, but at once accurate and functional robots. Prime control unit.

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# SP3C Prime Series

## The most compact and functional Cartesian sprue picker

Designed to combine low power consumption and high reliability with maximum performance. Equipped with 3 servo-driven axes, run by advanced electronics, it allows quick movements and an unthinkable productivity.

For minimal wear

from wear for millions of cycles

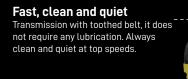
The cable chain guarantees a higher level of protection

than common corrugated tubes, preserving the cables



Prime Campetella's control unit





Zero footprint on the ground \_

Compact electrical panel, integrated on board

## Long-lasting precision

The recirculating ball bearings on the hardened steel prismatic guide provide the highest levels of precision and reliability

Model:	SP3C - 1 A	SP3C - 2 A
Number of linear axes:	3 (X,Y,Z)	3 (X,Y,Z)
Number of rotary axes:	<del>-</del>	-
Vertical axis:	Direct	Direct
A-Axis rotation - Vetical [deg]:		-
Pneumatic rotating base rotation [deg]:	-	-
Z-axis stroke - Horizontal [mm]:	1200	1500
X-axis stroke - Extraction [mm]:	30	00
Y-axis stroke - Vertical [mm]:	80	00
Minimum cycle time with maximum load [s]:	4	4



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S. H.S.I. 3DP Device

V.O.S Jog Over



	Pneumatic gripper	•
\	Gripper rotation (Pneumatic B-axis)	-

 $\bullet$  Standard  $\,\circ$  Optional – Not available

**CNC** control cabinet integrated on board SP3C PRIME-Series is equipped with a CNC control cabinet integrated on board. As a result, ground footprint is zeroed and the maximum plant cleaning is guaranteed, due to the total absence of wiring on the pavement.

# SP3R Prime Series

## The compact and functional Cartesian-rotary sprue picker

Designed to combine low power consumption and high reliability with maximum performance. Equipped with 3 servo-driven axes, run by advanced electronics, it allows quick movements and an unthinkable productivity for the most classic pneumatic sprue pickers.



Prime Campetella's control unit



Fast, clean and quiet
Transmission with toothed belt, it
does not require any lubrication.
Always clean and quiet at top speeds.

and reliability

Long-lasting precision

The recirculating ball bearings on

the hardened steel prismatic guide provide the highest levels of precision

For minimal wear
The cable chain guarantees a higher level of protection
than common corrugated tubes, preserving the cables
from wear for millions of cycles

Zero footprint on the ground

Compact electrical panel, integrated on board

Model:	SP3-R
Number of linear axes:	2 (X,Y)
Number of rotary axes:	1(Z)
Vertical axis:	Direct
Z-axis rotation - Vetical [deg]:	± 90°
Pneumatic rotating base rotation [deg]:	-
Z-axis stroke - Horizontal [mm]:	-
X-axis stroke - Extraction [mm]:	300
Y-axis stroke - Vertical [mm]:	800
Minimum cycle time with maximum load [s]:	4



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S.

H.S.I.

3DL Dev

V.O.9

.S Jog Over



	Pneumatic gripper	•
,	Gripper rotation (Pneumatic B-axis)	-

 $\bullet$  Standard  $\,\circ$  Optional  $\,$  – Not available

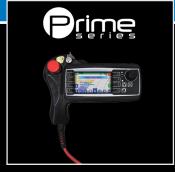
14

CNC control cabinet integrated on board SP3R PRIME-Series is equipped with a CNC control cabinet integrated on board. As
a result, ground footprint is zeroed and the maximum plant cleaning is guaranteed, due to the total absence of wiring on the
pavement.

# SP3R-AR Prime Series

## The sprue picker with a rotary pneumatic base for minimum footprint

Designed to combine low power consumption and high reliability with maximum performance. Equipped with 3 servo-driven axes, run by advanced electronics, it allows quick movements and an unthinkable productivity. In addition, it is equipped with an adjustable rotary pneumatic base, which in certain cases is perfect for limiting the automation footprint.



Prime Campetella's control unit



### Fast, clean and quiet

Transmission with toothed belt, it does not require any lubrication. Always clean and quiet at top speeds.

# Zero footprint on the ground

Compact electrical panel, integrated on board

## Optimize space.

The rotating base allows to make the most of the space on the IMM

## Long-lasting precision

The recirculating ball bearings on the hardened steel prismatic guide provide the highest levels of precision and reliability

### For minimal wear

The cable chain guarantees a higher level of protection than common corrugated tubes, preserving the cables from wear for millions of cycles

Model:	SP3R-AR	
Number of linear axes:	2 (X,Y)	
Number of rotary axes:	2 (Z, rotating base)	
Vertical axis:	Direct	
Z-axis rotation - Vetical [deg]:	± 90°	
Pneumatic rotating base rotation [deg]:	0°/ (45°÷ 60°)	
Z-axis stroke - Horizontal [mm]:	-	
X-axis stroke - Extraction [mm]:	300	
Y-axis stroke - Vertical [mm]:	800	
Minimum cycle time with maximum load [s]:	4	



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S.

H.S.I.

3DP Device

V.O.S

Jog Over



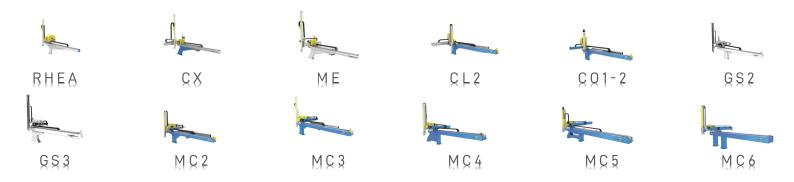
• Standard  $\circ$  Optional – Not available

**CNC control cabinet integrated on board** SP3R-AR PRIME-Series is equipped with a CNC control cabinet integrated on board. As a result, ground footprint is zeroed and the maximum plant cleaning is guaranteed, due to the total absence of wiring on the pavement.



# Highly configurable robots, optimized to guarantee maximum performance in specific sectors

Campetella Robotic Center has a wide range of Cartesian robots, each one designed and optimized to guarantee maximum performance in the most specific sectors. Featured by a modular design, the particular characteristics of each robot are the result of the fusion between series and mechanical family.



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simple, but at once accurate and functional sized robots, with advanced features robots. Prime control unit.



Prime Series: dedicated to small-sized, E-Series: dedicated to small and mediumand maximum positioning accuracy. EVO control unit.



X-Series: it represents the state-of-theart of Campetella technology, dedicated to small, medium and big-sized robots, with record-breaking performance in terms of functionality, speed and control. EVO control unit

# Prime Series

## Ultra-compact, ultra-fast. Ideal for small-sized injection molding machines

Minimal design, a mix of functionality and accuracy, this is the top-entry Cartesian industrial robot designed to offer high performance in the highest quality-price ratio.





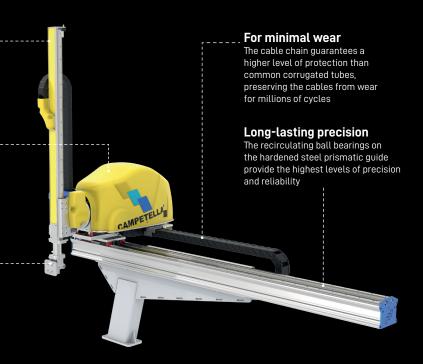
Fast, clean and quiet Transmission with toothed belt, it does not require any lubrication. Always clean and quiet at top speeds.

Zero footprint on the ground

Compact electrical panel, integrated on board

Connections on the wrist

Vacuum line, gripper control and digital signal connector: all that is needed for flexible handling of the gripping hand



Model:	SP3 RHEA - 1 A	SP3 RHEA - 2 A
Maximum Payload [kg]:	2	2
Vertical axis:	Direct	Direct
Vertical axis pneumatic balancing:	-	-
Z-axis stroke - Horizontal [mm]:	1200	1500
X-axis stroke - Extraction [mm]:	30	00
Y-axis stroke - Vertical [mm]:	800	800
Minimum cycle time with maximum load [s]:	Ę	5



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S.



	Pneumatic C-axis	•
	Pneumatic C-axis + Pneumatic AB-axis (1)	-
	Pneumatic C-axis + Electric B-axis <sup>(1)</sup>	-
	Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis <sup>(1)</sup>	-
ļ	Electric C-axis + Electric AB-axis <sup>(1)</sup>	-

(1) With maximum load reduction [kg]

• Standard o Optional - Not available

The mechanical structure of RHEA PRIME Series The vertical axis group is frontally fixed on the extraction axis. This results in reduced overhangs, high mechanical balance and total absence of collision problems between the article and the extraction axis.

# Prime Series

## The compact robot for small and medium-sized tonnage injection molding machines

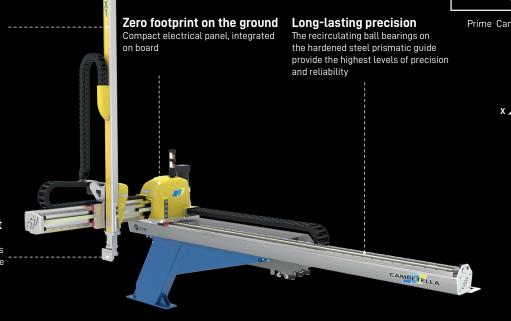
Minimal design, a mix of functionality and accuracy, this is the top-entry Cartesian industrial robot designed to offer high performance in the highest quality-price ratio.



Prime Campetella's control unit

Fast, clean and quiet Transmission with toothed belt, it does not require any lubrication. Always clean and quiet at top speeds.

Connections on the wrist Vacuum line, gripper control and digital signal connector: all that is needed for flexible handling of the gripping hand



Model:	CX1-1A	CX1-2A
Maximum payload [kg]:	6	6
Vertical axis:	Direct	Direct
Vertical axis pneumatic balancing:	-	-
Z-axis stroke - Horizontal [mm]:	1500	2000
X-axis stroke - Extraction [mm]:	60	00
Y-axis stroke - Vertical [mm]:	1200	1200
Minimum cycle time with maximum load [s]:	6	6



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S.

Jog Over



Pneumatic C-axis	•
Pneumatic C-axis + Pneumatic AB-axis <sup>(1)</sup>	0
Pneumatic C-axis + Electric B-axis <sup>(1)</sup>	-
Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis <sup>(1)</sup>	-
Electric C-axis + Electric AB-axis <sup>(1)</sup>	-

(1) With maximum load reduction [kg]

• Standard o Optional - Not available

18

The mechanical structure of CX1 PRIME Series Featured by the extraction axis cantileverally fixed on the side opposite the hopper. The strength of this architecture is the absence of collision problems between the robot and the hopper.

# CX1 E-Series

## The compact robot for small and medium-sized tonnage injection molding machines

Last generation industrial linear robot, designed for high performance, accuracy and reliability. The most advanced functions for the ultimate level of control.

Compact electrical panel, integrated



EVO Campetella's control unit



Fast, clean and quiet Transmission with toothed belt, it does not require any lubrication. Always clean and quiet at top speeds.

elt, it fon.

Maximum control
Configurable wrist, with pneumatic
or electric axes, for any required
orientation

Model:	CX1-1 A	CX1-2 A
Maximum payload [kg]:	6	6
Vertical axis:	Direct	Direct
Vertical axis pneumatic balancing:	-	-
Z-axis stroke - Horizontal [mm]:	1500	2000
X-axis stroke - Extraction [mm]:	60	00
Y-axis stroke - Vertical [mm]:	1200	1200
Minimum cycle time with maximum load [s]:	5,5	5,5

Zero footprint on the ground Long-lasting precision

The recirculating ball bearings on

and reliability

the hardened steel prismatic guide provide the highest levels of precision



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S.

H.S.I.

3DP

3DP Device

/.0.S

Jog Over



Pneumatic C-axis	•
Pneumatic C-axis + Pneumatic AB-axis <sup>(1)</sup>	0
Pneumatic C-axis + Electric B-axis <sup>(1)</sup>	0
Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis <sup>(1)</sup>	0
Electric C-axis + Electric AB-axis <sup>(1)</sup>	-

(1) With maximum load reduction [kg]

CAMPETELLA

• Standard o Optional - Not available

**The mechanical structure of CX1 E-Series** Featured by the extraction axis cantileverally fixed on the side opposite the hopper. The strength of this architecture is the absence of collision problems between the robot and the hopper.

# Series

The compact robot for small and medium-sized tonnage injection molding machines

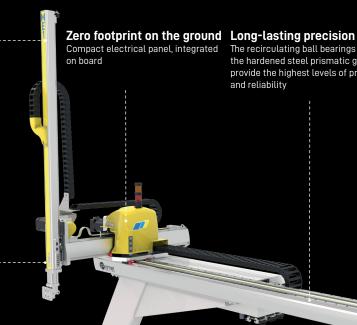
Minimal design, a mix of functionality and accuracy, this is the top-entry Cartesian industrial robot designed to offer high performance in the highest quality-price ratio.



Prime Campetella's control unit

Fast, clean and quiet

Transmission with toothed belt, it does not require any lubrication. Always clean and quiet at top sneeds



## Connections on the wrist

Vacuum line, gripper control and digital signal connector: all that is needed for flexible handling of the gripping hand

Model:	ME1-1A	ME1-2A
Maximum payoad [kg]:	6	6
Vertical axis:	Direct	Direct
Vertical axis pneumatic balancing:	-	-
Z-axis stroke - Horizontal [mm]:	1500	2000
X-axis stroke - Extraction [mm]:	60	00
Y-axis stroke - Vertical [mm]:	1200	1200
Minimum cycle time with maximum load [s]:		5



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S.



The recirculating ball bearings on

and reliability

the hardened steel prismatic guide

provide the highest levels of precision

Pneumatic C-axis	•
Pneumatic C-axis + Pneumatic AB-axis <sup>(1)</sup>	0
Pneumatic C-axis + Electric B-axis <sup>(1)</sup>	-
Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis <sup>(1)</sup>	-
Electric C-axis + Electric AB-axis <sup>(1)</sup>	-

CAMPETELLA

(1) With maximum load reduction [kg]

• Standard o Optional - Not available

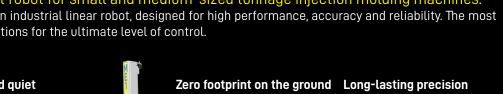
20

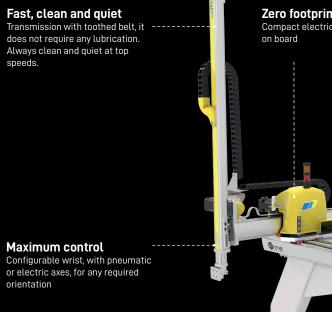
The mechanical structure of ME1 PRIME Series The vertical axis group is frontally fixed on the extraction axis. This results in reduced overhangs, high mechanical balance and total absence of collision problems between the article and the extraction axis.

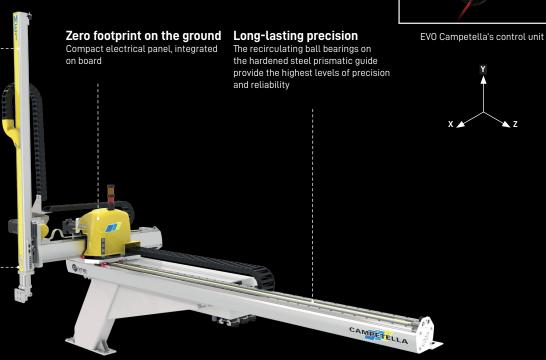
# E-Series

## The compact robot for small and medium-sized tonnage injection molding machines.

Last generation industrial linear robot, designed for high performance, accuracy and reliability. The most advanced functions for the ultimate level of control.







Model:	ME1-1A	ME1-2A
Maximum payload [kg]:	6	6
Vertical axis:	Direct	Direct
Vertical axis pneumatic balancing:	-	-
Z-axis stroke - Horizontal [mm]:	1500	2000
X-axis stroke - Extraction [mm]:	61	00
Y-axis stroke - Vertical [mm]:	1200	1200
Minimum cycle time with maximum load [s]:	5,5	5,5



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S.

H.S.I.

Jog Over



	Pneumatic C-axis	•
	Pneumatic C-axis + Pneumatic AB-axis <sup>(1)</sup>	0
	Pneumatic C-axis + Electric B-axis <sup>(1)</sup>	0
•	Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis <sup>(1)</sup>	0
).	Electric C-axis + Electric AB-axis <sup>(1)</sup>	-

(1) With maximum load reduction [kg]

• Standard o Optional - Not available

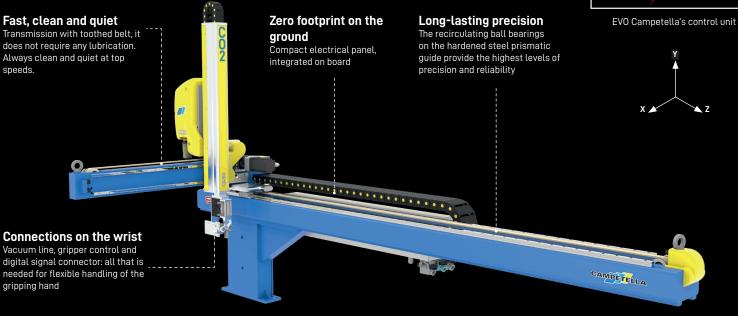
The mechanical structure of ME1 E-SeriesThe vertical axis group is frontally fixed on the extraction axis. This results in reduced overhangs, high mechanical balance and total absence of collision problems between the article and the extraction axis.

# CO1-CO2 E-Series

The compact robot for small and medium-sized tonnage injection molding machines

Last generation industrial linear robot, designed for high performance, accuracy and reliability. The most advanced functions for the ultimate level of control.





Model:	C01 - 1 A	C01 - 1 L	C02-1A	C02-1L	C02- 2 A	CO2- 2 L
Maximum Payload [kg]:	9	9	9	9	9	9
Vertical axis:	Direct	Telescopic	Direct	Telescopic	Direct	Telescopic
Vertical axis pneumatic balancing:	-	_	_	-	_	-
Z-axis stroke - Horizontal [mm]:	1600	1600	2000	2000	2500	2500
X-axis stroke - Extraction [mm]:	600	600	700	700	700	700
Y-axis stroke - Vertical [mm]:	1000	1000	1200	1400	1200	1400
Minimum cycle time with maximum load [s]:				8		

Jog Over



Float Balanced Axis Carbon Technology Dynamic Vacuum

at Batanoca Axio Garbon reenhotogy Dynamic vacco

K.E.R.S. H.S.I. 3DP Device V.O.S

B AB

Pneumatic C-axis	•
Pneumatic C-axis + Pneumatic AB-axis <sup>(1)</sup>	0
Pneumatic C-axis + Electric B-axis <sup>(1)</sup>	0
Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis <sup>(1)</sup>	0
Electric C-axis + Electric AB-axis <sup>(1)</sup>	-

(1) With maximum load reduction [kg]

• Standard o Optional - Not available

22

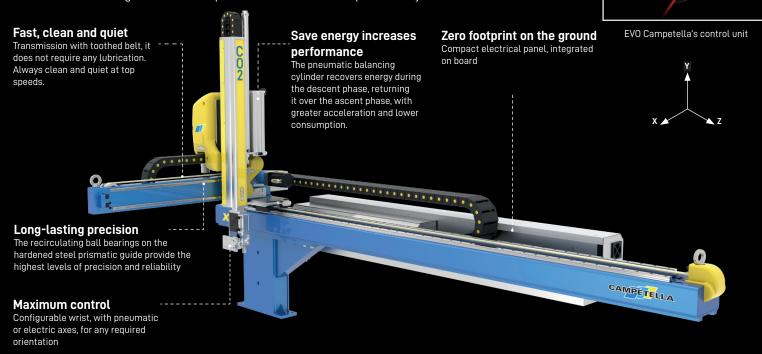
**TOP ENTRY ROBOTS** 

The mechanical structure of C01-C02 E-Series Featured by the extraction axis cantileverally fixed on the side opposite the hopper.
 The strength of this architecture is the absence of collision problems between the robot and the hopper.

# C Q 2 X-Series

The most performing compact robot for small and medium-sized tonnage injection molding machines

Accurately designed for ultimate performance on every front. Strength, speed and control are the main features of this last generation manipulator for the maximum productivity.



	İ		
Model:	C01 - 1 S	CO2 - 1 S	CO2 - 2 S
Maximum Payload [kg]:	6	6	6
Vertical axis:	Telescopic	Telescopic	Telescopic
Vertical axis pneumatic balancing:	•	•	•
Z-axis stroke - Horizontal [mm]:	1600	2000	2500
X-axis stroke - Extraction [mm]:	600	700	700
Y-axis stroke - Vertical [mm]:	1000	1400	1400
Minimum cycle time with maximum load [s]:	4,5	4,5	4,5



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S. H.S.I. **V.O.S** Jog Over



Pneumatic C-axis	•
Pneumatic C-axis + Pneumatic AB-axis <sup>(1)</sup>	0
Pneumatic C-axis + Electric B-axis <sup>(1)</sup>	-
Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis <sup>(1)</sup>	-
Electric C-axis + Electric AB-axis <sup>(1)</sup>	-

(1) With maximum load reduction [kg]

• Standard o Optional - Not available

The mechanical structure of CO1-CO2 X-Series Featured by the extraction axis cantileverally fixed on the side opposite the hopper. The strength of this architecture is the absence of collision problems between the robot and the hopper.

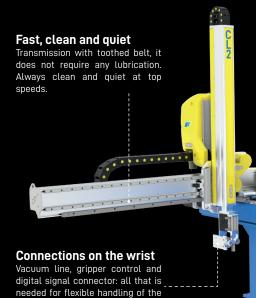
# CL2 E-Series

## The suitable robot for small and medium-sized tonnage injection molding machines

Last generation industrial linear robot, designed for high performance, accuracy and reliability. The most advanced functions for the ultimate level of control.



EVO Campetella's control unit



Zero footprint on	Long-lasting precision
he ground compact electrical panel, ntegrated on board	The recirculating ball bearings on the hardened steel prismatic guide provide the highest levels of precision and reliability

Model:	CL2 - 1 A	CL2 - 1 L	CL2 - 2 A	CL2 - 2 L	CL2 - 3 A	CL2 - 3 L	
Maximum Payload [kg]:	9	9	9	9	9	9	
Vertical axis:	Direct	Telescopic	Direct	Telescopic	Direct	Telescopic	
Vertical axis pneumatic balancing:	-	-	-	-	-	-	
Z-axis stroke - Horizontal [mm]:	2000	2000	2500	2500	3000	3000	
X-axis stroke - Extraction [mm]:	1000	1000	1000	1000	1000	1000	
Y-axis stroke - Vertical [mm]:	1400	1600	1400	1600	1400	1600	
Minimum cycle time with maximum load [s]:	8						



gripping hand

Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S. H.S.I. 3DP Device V.O.S

.S Jog Over



Pneumatic C-axis	•
Pneumatic C-axis + Pneumatic AB-axis <sup>(1)</sup>	0
Pneumatic C-axis + Electric B-axis <sup>(1)</sup>	0
Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis <sup>(1)</sup>	0
Electric C-axis + Electric AB-axis <sup>(1)</sup>	0

(1) With maximum load reduction [kg]

CAMPETELLA

 $\bullet$  Standard  $\circ$  Optional – Not available

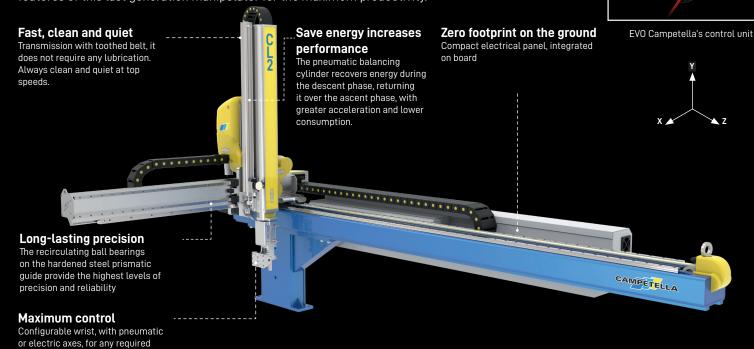
24

• The mechanical structure of CL2 E-Series Featured by the extraction axis cantileverally fixed on the side opposite the hopper. The strength of this architecture is the absence of collision problems between the robot and the hopper.

# CL2 X-Series

# The most performing robot for small and medium-sized tonnage injection molding machines

Accurately designed for ultimate performance on every front. Strength, speed and control are the main features of this last generation manipulator for the maximum productivity.



Model:	CL2 - 1 B	CL2 - 1 M	CL2 - 1 H	CL2 - 1 HS	CL2 - 2 B	CL2 - 2 M	CL2 - 2 H	CL2 - 2 HS	CL2 - 3 B	CL2 - 3 M	CL2 - 3 H
Maximum payload [kg]:	16	30	18	8	16	30	18	8	16	30	18
Vertical axis:	Direct	Direct	Telescopic	Telescopic	Direct	Direct	Telescopic	Telescopic	Direct	Direct	Telescopic
Vertical axis pneumatic balancing:	-	•	•	•	-	•	•	•	-	•	•
Z-axis stroke - Horizontal [mm]:	2000	2000	2000	2000	2500	2500	2500	2500	3000	3000	3000
X - axis stroke - Extraction [mm]:	970	970	970	970	970	970	970	970	970	970	970
Y-axis stroke - Vertical [mm]:	1400	1200	1600	1600	1400	1200	1600	1600	1400	1200	1600
Minimum cycle time with maximum load [s]:	6	6	6	4,5	6	6	6	4,5	6	6	6



orientation

Float Balanced Axis Carbon Technology Dynamic Vacuum

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K.E.R.S. H.S.I. 3DP Device V.O.S Jog Over



Pneumatic C-axis	•
Pneumatic C-axis + Pneumatic AB-axis <sup>(1)</sup>	0
Pneumatic C-axis + Electric B-axis (1) (2)	0
Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis <sup>(1)</sup> (2)	0
Electric C-axis + Electric AB-axis <sup>(1) (2)</sup>	0

(1) With maximum load reduction [kg] - (2) Not available on HS versions

• Standard o Optional - Not available

- The mechanical structure of CL2 E-Series Featured by the extraction axis cantileverally fixed on the side opposite the hopper. The strength of this architecture is the absence of collision problems between the robot and the hopper.
- **Available in the HS-High Speed exclusive version** For the most demanding applications in terms of speed, the CL2 X-Series has been developed in the exclusive HS version, featured by enhanced engines for a sensational cycle time of up to 4.5 seconds.

25

# GS2 X-Series

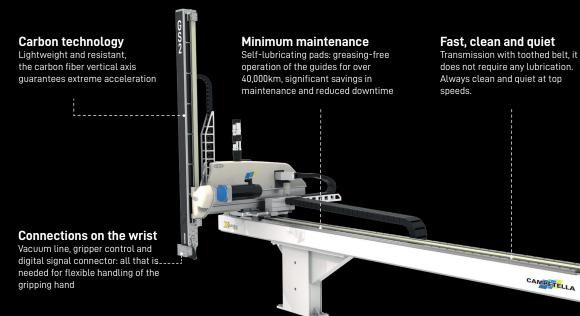
## Maximum speed for the best productivity

GS2 X-Series is a top-entry robot designed for the most extreme performance: ultra-performing engines combined with aerospace materials assure record-breaking acceleration and speed, for operating cycle times up to 2.5 seconds.



EVO Campetella's control unit





Model:	GS2-1B	GS2-2B
Maximum Payload [kg]:	2,5	2,5
Vertical axis:	Direct	Direct
Vertical axis pneumatic balancing:	-	-
Z-axis stroke - Horizontal [mm]:	2000	2500
X - axis stroke - Extraction [mm]:	50	00
Y-axis stroke - Vertical [mm]:	1200	1200
Minimum cycle time with maximum load [s]:	2	5



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S. H.S.I. 3DP Device

Jog Over

**V.O.S** 

B C AB

Pneumatic C-axis	•
Pneumatic C-axis + Pneumatic AB-axis <sup>(1)</sup>	-
Pneumatic C-axis + Electric B-axis <sup>(1)</sup>	-
Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis <sup>(1)</sup>	-
Electric C-axis + Electric AB-axis <sup>(1)</sup>	-

(1) With maximum load reduction [kg]

• Standard o Optional - Not available

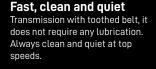
26

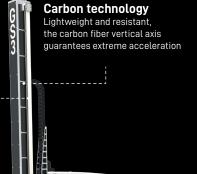
• The mechanical structure of GS2 X-Series the vertical axis group is frontally fixed on the extraction axis. This results in reduced overhangs, high mechanical balance and total absence of collision problems between the article and the extraction axis.

# X-Series

## The ultra-fast top-entry robot for high payloads

The GS3 X-Series is a top-entry robot designed for the most extreme performances: ultra-high-performance motors combined with materials used in the aerospace industry ensure record-breaking accelerations and speed, for operating cycle times of up to 3.5 seconds.





### Minimum maintenance

Self-lubricating pads: greasing-free operation of the guides for over 40,000km, significant savings in maintenance and reduced downtime

CAMPETELLA



EVO Campetella's control unit



### Connections on the wrist

Vacuum line, gripper control and digital signal connector: all that is needed for flexible handling of the gripping hand

Model:	GS3-4B	GS3-5B	GS3-6B			
Maximum Payload [kg]:	8	8	8			
Vertical axis:	Direct	Direct	Direct			
Vertical axis pneumatic balancing:	-	-	-			
Z-axis stroke - Horizontal [mm]:	2500	3000	3500			
X - axis stroke - Extraction [mm]:		800				
Y-axis stroke - Vertical [mm]:	1750					
Minimum cycle time with maximum load [s]:		3,5				



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S.

H.S.I.

**V.O.S** 

	Pneumatic C-axis	-
	Pneumatic C-axis + Pneumatic AB-axis <sup>(1)</sup>	-
	Pneumatic C-axis + Electric B-axis <sup>(1)</sup>	-
	Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis <sup>(1)</sup>	•
Į.	Electric C-axis + Electric AB-axis <sup>(1)</sup>	-

(1) With maximum load reduction [kg]

• Standard o Optional - Not available

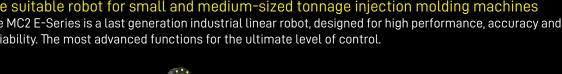
The mechanical structure of GS3 X-Series the vertical axis group is frontally fixed on the extraction axis. This results in reduced overhangs, high mechanical balance and total absence of collision problems between the article and the extraction axis.

Jog Over

# E-Series

## The suitable robot for small and medium-sized tonnage injection molding machines

The MC2 E-Series is a last generation industrial linear robot, designed for high performance, accuracy and reliability. The most advanced functions for the ultimate level of control.









EVO Campetella's control unit



## Connections on the wrist

Vacuum line, gripper control and digital signal connector: all that is needed for flexible handling of the gripping hand

Model:	MC2 - 1 A	MC2 - 1 L	MC2 - 2 A	MC2 - 2 L	MC2 - 3 A	MC2 - 3 L
Maximum Payload [kg]:	9	9	9	9	9	9
Vertical axis:	Direct	Telescopic	Direct	Telescopic	Direct	Telescopic
Vertical axis pneumatic balancing:	-	-	-	-	-	-
Z-axis stroke - Horizontal [mm]:	2000	2000	2500	2500	3000	3000
X-axis stroke - Extraction [mm]:	1000	1000	1000	1000	1000	1000
Y-axis stroke - Vertical [mm]:	1400	1600	1400	1600	1400	1600
Minimum cycle time with maximum load [s]:				8		



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S. H.S.I.

**3DP Device** 

Jog Over



Long-lasting precision

and reliability

The recirculating ball bearings on

the hardened steel prismatic guide

provide the highest levels of precision

Pneumatic C-axis	•
Pneumatic C-axis + Pneumatic AB-axis <sup>(1)</sup>	0
Pneumatic C-axis + Electric B-axis <sup>(1)</sup>	0
Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis <sup>(1)</sup>	0
Electric C-axis + Electric AB-axis <sup>(1)</sup>	-

CAMPETELLA

(1) With maximum load reduction [kg]

• Standard o Optional - Not available

28

The mechanical structure of MC2 E-Series The vertical axis group is frontally fixed on the extraction axis. This results in reduced overhangs, high mechanical balance and total absence of collision problems between the article and the extraction axis.

# MC2 X-Series

## The most performing robot for small and medium-sized tonnage injection molding machines

A premium level top entry industrial linear robot, accurately designed for ultimate performance on every front. Strength, speed and control are the main features of this last generation manipulator for the maximum productivity.



# Save energy increases performance

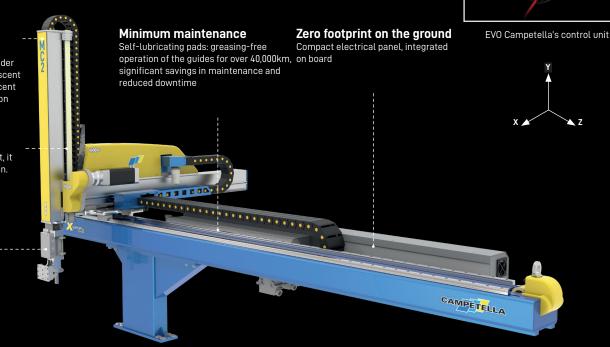
The pneumatic balancing cylinder recovers energy during the descent phase, returning it over the ascent phase, with greater acceleration and lower consumption.

### Fast, clean and quiet

Transmission with toothed belt, it does not require any lubrication. Always clean and quiet at top speeds.

### Maximum control

Configurable wrist, with pneumatic or electric axes, for any required orientation



Model:	MC2-1B	MC2-1M	MC2-1H	MC2-1HS	MC2-2B	MC2-2M	MC2-2H	MC2-2HS	MC2-3B	MC2-3M	MC2-3H
Maximum payload [kg]:	16	30	18	8	16	30	18	8	16	30	18
Vertical axis:	Direct	Direct	Telescopic	Telescopic	Direct	Direct	Telescopic	Telescopic	Direct	Direct	Telescopic
Vertical axis pneumatic balancing:	-	•	•	•	-	•	•	•	-	•	•
Z-axis stroke - Horizontal [mm]:	2000	2000	2000	2000	2500	2500	2500	2500	3000	3000	3000
X - axis stroke - Extraction [mm]:	970	970	970	970	970	970	970	970	970	970	970
Y-axis stroke - Vertical [mm]:	1400	1200	1600	1600	1400	1200	1600	1600	1400	1200	1600
Minimum cycle time with maximum load [s]:	6	6	6	4,5	6	6	6	4,5	6	6	6



Float Balanced Axis Carbon Technology Dynamic Vacuum

•

K.E.R.S. H.S.I. 3DP Device V.O.S Jog Over



Pneumatic C-axis	•
Pneumatic C-axis + Pneumatic AB-axis <sup>(1)</sup>	0
Pneumatic C-axis + Electric B-axis (1) (2)	0
Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis <sup>(1) (2)</sup>	0
Electric C-axis + Electric AB-axis <sup>(1) (2)</sup>	0

(1) With maximum load reduction [kg] - (2) Not available on HS versions

• Standard o Optional - Not available

- The mechanical structure of MC2 X-Series The vertical axis group is frontally fixed on the extraction axis. This results in reduced overhangs, high mechanical balance and total absence of collision problems between the article and the extraction axis.
- Available in the HS-High Speed exclusive version For the most demanding applications in terms of speed, the MC2 X-Series has been developed in the exclusive HS version, featured by enhanced engines for a sensational cycle time of up to 4.5 seconds.

# MC3 E-Series

## The suitable robot for medium and large-sized tonnage injection molding machines

The MC3 E-Series is a last generation industrial linear robot, designed for high performance, accuracy and reliability. The most advanced functions for the ultimate level of control.



Fast, clean and quiet
Transmission with toothed belt, it
does not require any lubrication.
Always clean and quiet at top
speeds.

Connections on the wrist Vacuum line, gripper control and digital signal connector: all that is needed for flexible handling of the

gripping hand

Zero footprint on the ground
Compact electrical panel, integrated on board

Compact electrical panel, integrated on boa

Model:	MC3 - 5 L	MC3 - 6 L	MC3 - 7 L
Maximum Payload [kg]:	16	16	16
Vertical axis:	Telescopic	Telescopic	Telescopic
Vertical axis pneumatic balancing:	-	-	-
Z-axis stroke - Horizontal [mm]:	2500	3000	3500
X-axis stroke - Extraction [mm]:	1200	1200	1200
Y-axis stroke - Vertical [mm]:	1800	1800	1800
Minimum cycle time with maximum load [s]:	10	10	10

Jog Over



Float Balanced Axis Carbon Technology Dynamic Vacuum

at batanoca Axio Garbon reenhotegy **Dynamic vacco** 

K.E.R.S. H.S.I. 3DP Device V.O.S



Pneumatic C-axis	•
Pneumatic C-axis + Pneumatic AB-axis <sup>(1)</sup>	0
Pneumatic C-axis + Electric B-axis <sup>(1)</sup>	0
Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis <sup>(1)</sup>	0
Electric C-axis + Electric AB-axis <sup>(1)</sup>	-

(1) With maximum load reduction [kg]

• Standard o Optional - Not available

30

• CNC control cabinet integrand footprint is zeroed

• The mechanical structure of MC3 E-Series The vertical axis group is frontally fixed on the extraction axis. This results in reduced overhangs, high mechanical balance and total absence of collision problems between the article and the extraction axis.

**CNC control cabinet integrated on board** MC3 E-Series is equipped with a CNC control cabinet integrated on board. As a result, ground footprint is zeroed and the maximum plant cleaning is guaranteed, due to the total absence of wiring on the pavement.

# X-Series

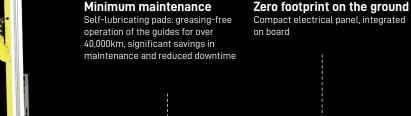
## The suitable robot for medium and large-sized tonnage injection molding machines

Accurately designed for ultimate performance on every front. Strength, speed and control are the main

features of this last generation manipulator for the maximum productivity.



EVO Campetella's control unit



Maximum control

Save energy increases

The pneumatic balancing cylinder

recovers energy during the descent

phase, returning it over the ascent phase, with greater acceleration and

performance

lower consumption.

Fast, clean and quiet Transmission with toothed belt, it does not require any lubrication. Always clean and quiet at top

Configurable wrist, with pneumatic or electric axes, for any required orientation

Model:	MC3 - 5 B	MC3 - 5 M	MC3 - 5 H	MC3 - 6 B	MC3 - 6 BHS	MC3 - 6 M	MC3 - 6 H	MC3 - 7 B	MC3 - 7 M	MC3 - 7 H
Maximum Payload [kg]:	30	40	30	30	12	40	30	30	40	30
Vertical axis:	Direct	Direct	Telescopic	Direct	Direct	Direct	Telescopic	Direct	Direct	Telescopic
Vertical axis pneumatic balancing:	-	•	•	-	-	•	•	-	•	•
Z-axis stroke - Horizontal [mm]:	2500	2500	2500	3000	3000	3000	3000	3500	3500	3500
X - axis stroke - Extraction [mm]:	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Y-axis stroke - Vertical [mm]:	1600	1400	1800	1600	1600	1400	1800	1600	1400	1800
Minimum cycle time with maximum load [s]:	8	10	8	8	6	10	8	8	10	8



Float Balanced Axis Carbon Technology Dynamic Vacuum

Jog Over K.E.R.S. H.S.I. **V.O.S** 



Pneumatic C-axis	•
Pneumatic C-axis + Pneumatic AB-axis <sup>(1)</sup>	0
Pneumatic C-axis + Electric B-axis (1) (2)	0
Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis <sup>(1)</sup> (2)	0
Electric C-axis + Electric AB-axis <sup>(1)</sup> (2)	0

(1) With maximum load reduction [kg] - (2) Not available on HS versions

• Standard o Optional - Not available

CAMPETELLA

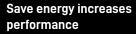
- The mechanical structure of MC3 X-Series The vertical axis group is frontally fixed on the extraction axis. This results in reduced overhangs, high mechanical balance and total absence of collision problems between the article and the extraction axis.
- Available in the HS-High Speed exclusive version For the most demanding applications in terms of speed, the MC3 X-Series has been developed in the exclusive HS version, featured by enhanced engines for a sensational cycle time of up to 6 seconds.

# MC4 X-Series

The generously sized robot with maximum performance for large-sized tonnage injection molding machines

Accurately designed for ultimate performance on every front. Strength, speed and control are the main features of this last generation manipulator for the maximum productivity.

reactives of this tast generation maniputator for the maximum productivi



The pneumatic balancing cylinder recovers energy during the descent phase, returning it over the ascent phase, with greater acceleration and lower consumption.



Fast, clean and quiet

Transmission with toothed belt, it does not require any lubrication. Always clean and quiet at top speeds.



EVO Campetella's control unit



### Maximum control

Configurable wrist, with pneumatic or electric axes, for any required orientation

Model:	MC4 - 1 H	MC4 - 1T	MC4 - 2 H	MC4 - 2 T	MC4 - 3 H	MC4 - 3 T	MC4 - 4 H	MC4 - 4 T
Maximum Payload [kg]:	40	25	40	25	40	25	40	25
Vertical axis:	Telescopic (2x)	Telescopic (3x)						
Vertical axis pneumatic balancing:	•	•	•	•	•	•	•	•
Z-axis stroke - Horizontal [mm]:	3000	3000	3000	3000	3500	3500	4000	4000
X - axis stroke - Extraction [mm]:	1500	1500	1500	1500	1500	1500	1500	1500
Y-axis stroke - Vertical [mm]:	2000	2000	2400	2580	2400	2580	2400	2580
Minimum cycle time with maximum load [s]:	10	15	10	15	10	15	10	15



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S.

H.S.I.

3DP Device

V.0.S

Jog Over



Pneumatic C-axis	•
Pneumatic C-axis + Pneumatic AB-axis <sup>(1)</sup>	0
Pneumatic C-axis + Electric B-axis <sup>(1)</sup>	0
Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis <sup>(1)</sup>	0
Electric C-axis + Electric AB-axis <sup>(1)</sup>	-

(1) With maximum load reduction [kg]

CAMPETELLA

 $\bullet$  Standard  $\circ$  Optional – Not available

32

- The mechanical structure of MC4 X-Series The vertical axis group is frontally fixed on the extraction axis. This results in reduced overhangs, high mechanical balance and total absence of collision problems between the article and the extraction axis.
- **Electric panel on the ground** MC4 X-Series is exclusively equipped with the electric panel on the ground, for a reduce footprint and maximum user-friendliness.

# X-Series

## Solid and imposing, the ideal robot for large-sized tonnage injection molding machines

Accurately designed for ultimate performance on every front. Strength, speed and control are the main features of this last generation manipulator for the maximum productivity.

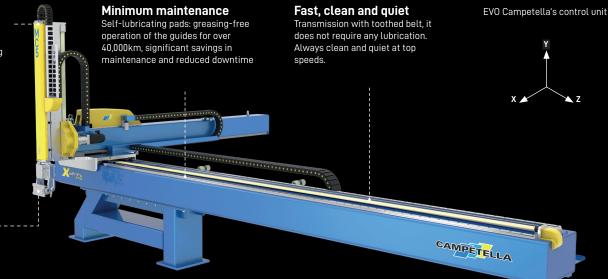


Save energy increases performance

The pneumatic balancing cylinder recovers energy during the descent phase, returning it over the ascent phase, with greater acceleration and lower consumption.

Maximum control Configurable wrist, with

pneumatic or electric axes. for any required orientation



Model:	MC5 - 1 H	MC5 - 1 T	MC5 - 2 H	MC5 - 2 T
Maximum Payload [kg]:	60	40	60	40
Vertical axis:	Telescopic(2x)	Telescopic(3x)	Telescopic(2x)	Telescopic(3x)
Vertical axis pneumatic balancing:	•	•	•	•
Z-axis stroke - Horizontal [mm]:	4000	4000	5000	5000
X - axis stroke - Extraction [mm]:	2000	2000	2500	2500
Y-axis stroke - Vertical [mm]:	2400	2400	2800	2800
Minimum cycle time with maximum load [s]:			20	



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S. H.S.I. **V.O.S** Jog Over



Pneumatic C-axis	•
Pneumatic C-axis + Pneumatic AB-axis <sup>(1)</sup>	0
Pneumatic C-axis + Electric B-axis <sup>(1)</sup>	0
Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis <sup>(1)</sup>	0
Electric C-axis + Electric AB-axis <sup>(1)</sup>	-

(1) With maximum load reduction [kg]

• Standard o Optional - Not available

- The mechanical structure of MC5 X-Series The vertical axis group is frontally fixed on the extraction axis. This results in reduced overhangs, high mechanical balance and total absence of collision problems between the article and the extraction axis.
- Electric panel on the ground MC5 X-Series is exclusively equipped with the electric panel on the ground, for a reduce footprint and maximum user-friendliness.

# X-Series

Colossal robot for record loads. Suitable for the highest tonnage injection molding machines.

Accurately designed for ultimate performance on every front. Strength, speed and control are the main features of this last generation manipulator for the maximum productivity.



## Save energy increases performance

The pneumatic balancing cylinder recovers energy during the descent phase, returning it over the ascent phase, with greater acceleration and lower consumption.

## Minimum maintenance Self-lubricating pads: greasing-free operation of the guides for over 40,000km, significant savings in maintenance and reduced downtime

## Fast, clean and quiet

Transmission with toothed belt, it does not require any lubrication. Always clean and quiet at top sneeds





### Maximum control

Configurable wrist, with pneumatic or electric axes, for any required orientation

Model:	MC6 - 1 H	MC6 - 1 T
Maximum Payload [kg]:	120	80
Vertical axis:	Telescopic(2x)	Telescopic(3x)
Vertical axis pneumatic balancing:	•	•
Z-axis stroke - Horizontal [mm]:	6000	6000
X - axis stroke - Extraction [mm]:	2500	2500
Y-axis stroke - Vertical [mm]:	3400	3400
Minimum cycle time with maximum load [s]:	50	50



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S. H.S.I. **V.O.S** Jog Over



Pneumatic C-axis	•
Pneumatic C-axis + Pneumatic AB-axis <sup>(1)</sup>	0
Pneumatic C-axis + Electric B-axis <sup>(1)</sup>	0
Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis <sup>(1)</sup>	0
Electric C-axis + Electric AB-axis <sup>(1)</sup>	-

CAMPETELLA

(1) With maximum load reduction [kg]

• Standard o Optional - Not available

## 34

- The mechanical structure of MC6 X-Series The vertical axis group is frontally fixed on the extraction axis. This results in reduced overhangs, high mechanical balance and total absence of collision problems between the article and the extraction axis.
- Electric panel on the ground MC6 X-Series is exclusively equipped with the electric panel on the ground, for a reduce footprint and maximum user-friendliness.







## High-dexterity robots, for palletizing operations and fast pick & place applications

SCARA (Selective Compliance Assembly Robot Arm) is an industrial robot with a kinematics resembling that of the human arm. Equipped with three axes of rotation - shoulder, elbow, wrist - and a linear axis for vertical movements, this is a robot with high dexterity, therefore usually used for palletizing operations and rapid pick & place and applications.

The strength of the Campetella SCARA is given by the peculiar architecture of the vertical axis: in particular, the Z-axis movement is possible thanks to the sliding of the entire arm along the robust supporting column of the robot, allowing a vertical stroke of over 3 meters with payload up to 50 kg.

This feature makes them a valid – in many ways superior - alternative to industrial robots as far as palletizing operations are concerned, especially in terms of footprint and easy programming.

Campetella SCARA are exclusively available in X-Series, which stands for maximum performance on all fronts.







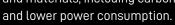


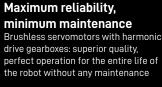


**X-Series:** it represents the state-of-the-art of Campetella technology, dedicated to small, medium and big-sized robots, with record-breaking performance in terms of functionality, speed and control. EVO control unit

#### The innovative high-speed SCARA

Spin 1 X-Series revolutionises the world of ultra-fast SCARA robots. Using latest-generation technologies and materials, including carbon fibres and additive moulding, it ensures limited weight, high performance





#### Carbon technology

Lightweight and resistant, the carbon fiber vertical axis guarantees extreme acceleration

#### **High control**

Mechanical fixing interface for gripping system



EVO Campetella's control unit



Model:	SPIN1-800HS
Maximum payload [kg]:	2
Range[mm]:	800
Number of servo-driven axes:	4



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S. H.S.I.

**V.O.S** 

Jog Over



i e

Mechanical interface for gripping system

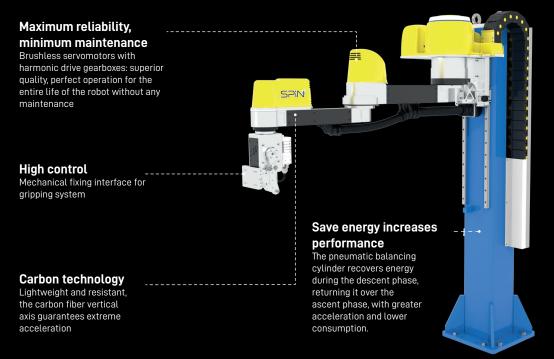
• Standard o Optional - Not available

Electric panel on the ground SPIN1 X-Series is exclusively equipped with the electric panel on the ground, for a reduce footprint and maximum user-friendliness.

## SPIN2 X-Series

#### The revolutionary SCARA with superior dexterity

The Spin 2 X-Series is a new way to conceive and employ the SCARA. High vertical run, long carbon fibre arms and built-in wrist are the ingredients of a new architecture. Designed to ensure wide working spaces, with heights only achieved by six-axe robots with an often oversized payload.





EVO Campetella's control unit



Model:	SPIN2-1000	SPIN2-1000HS	SPIN2-1200	SPIN2-1200HS
Maximum payload [kg]:	10	5	10	5
Range[mm]:	1000	1000	1200	1200
Number of servo-driven axes:	4 + 1*	4 + 1*	4 + 1*	4 + 1*

<sup>\*</sup> Ontional electric C-axis



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S. H.S.I. 3DP Device V.O.S Jog Over



Pneumatic C-axis	•
Electric C-axis <sup>(1)</sup>	0

(1) With maximum load reduction [kg]

• Standard o Optional - Not available

38

- Vertical ax on support column for maximum working space The mechanical structure of the Spin 2 X-Series is its distinctive feature. Unlike ordinary SCARA robots, which have a vertical axe located at the end of the arm, the Spin 2 features a support column along which the entire robot runs. This solution allows for an extremely long vertical travel, with working areas comparable to those of larger anthropomorphic robots. For uses such as palletising at very high altitudes, there are custom columns available, up to 3 metres high.
- **Electric panel on the ground** SPIN2 X-Series is exclusively equipped with the electric panel on the ground, for a reduce footprint and maximum user-friendliness.

SCARA ROBOT

## SPIN3 X-Series

#### Powerful and sturdy, the SCARA dedicated to heavy weights

Spin 2's bigger brother, it is muscled up with more powerful motors and even longer arms, with increased sections. The result is a SCARA robot that can handle generous loads in an extremely wide working space, with heights that can only be achieved by humungous six-axis robots with an often oversized payload.



EVO Campetella's control unit



## Maximum reliability, minimum maintenance

Brushless servomotors with harmonic drive gearboxes: superior quality, perfect operation for the entire life of the robot without any maintenance

#### High control

Mechanical fixing interface for gripping system

#### Carbon technology

Lightweight and resistant, the carbon fiber vertical axis guarantees extreme acceleration

## Save energy increases performance

The pneumatic balancing cylinder recovers energy during the descent phase, returning it over the ascent phase, with greater acceleration and lower consumption.

Model:	SPIN3-1200	SPIN3-1650
Maximum payload [kg]:	50	50
Range[mm]:	1200	1650
Number of servo-driven axes:	4 + 1*	4 + 1*

<sup>\*</sup> Optional electric C-axis



Float Balanced Axis Carbon Technology Dynamic Vacuum

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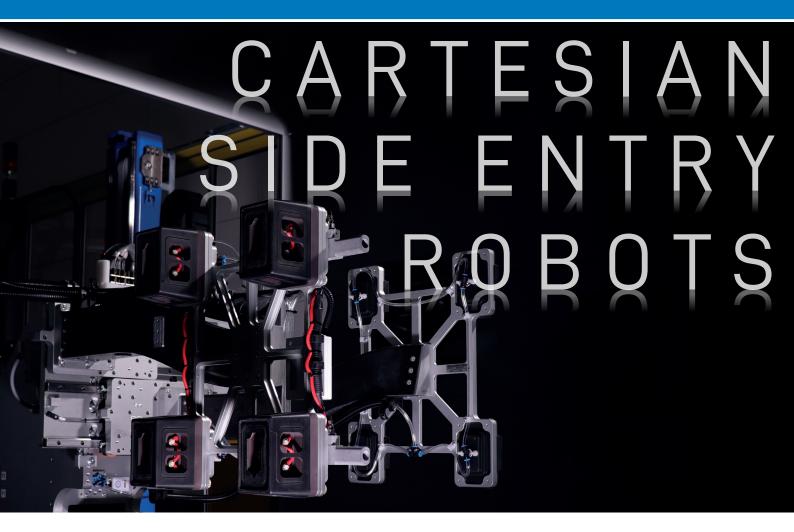


Pneumatic C-axis	-
Electric C-axis (1)	•

(1) With maximum load reduction [kg]

 $\bullet$  Standard  $\circ$  Optional – Not available

- Vertical axis on support column for maximum working space The mechanical structure of the Spin 3 X-Series is its distinctive feature. Unlike ordinary SCARA robots, which have a vertical axes located at the end of the arm, the Spin 3 features a support column along which the entire robot runs. This solution allows for an extremely long vertical travel, with working areas comparable to those of larger anthropomorphic robots. For uses such as palletising at very high altitudes, there are custom columns available, up to 3 metres high.
- **Electric panel on the ground** SPIN3 X-Series is exclusively equipped with the electric panel on the ground, for a reduce footprint and maximum user-friendliness.



# Highly configurable robots, optimized to guarantee maximum performance even at the highest speeds

Preserving linearity and simplicity of Cartesian programming, the peculiar architecture of the lateral robot allows to minimize the components' path from the picking area towards the storage area.

A shorter path, combined with powerful engines on a rigid frame, give life to a robot with extreme performance, allowing a considerable reduction in terms of production times.

Equipped with a ground-based supporting structure, they are completely free from IMM vibrations. As a result, maximum precision is guaranteed even at the highest speeds.

The side robots are ideal for multiple application requirements in various industrial sectors, from high speed pick & place to the most complex IML solutions.

The Campetella side-entries are exclusively available in X-Series, which stands for maximum performance on all fronts.













SM2

S M 3

SNSEPT Mini MSRVLA

MODULA

WARAFA Wax



**X-Series:** it represents the state-of-the-art of Campetella technology, dedicated to small, medium and big-sized robots, with record-breaking performance in terms of functionality, speed and control. EVO control unit

# SIDE ENTRY ROBOTS

## SM2 X-Series

#### The high-versatility entry solution in the side-entry world

SM2 X-Series is a high-performance robot that can combine the typical productivity of side-entry robots with versatility features that are revolutionary for this category. Its unprecedented architecture, with a solid anchoring to the ground and plenty of travel in all three directions, is a change in the paradigm of flexibility of use for side-entry robots.



EVO Campetella's control unit



#### Minimum maintenance

Zero vibrations, more

. The solid ground support base

Vertical axis pneumatic balancing:

Z-axis stroke - Horizontal [mm]:

X-axis stroke - Extraction [mm]:

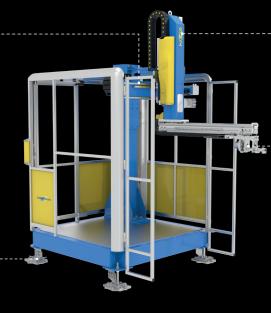
Y-axis stroke - Vertical [mm]:

Minimum cycle time with maximum load [s]:

isolates the robot from the vibrations of the IMM

precision

Self-lubricating pads: greasing-free operation of the guides for over 40,000km, significant savings in maintenance and reduced downtime



## Save energy increases performance

The pneumatic balancing cylinder recovers energy during the descent phase, returning it over the ascent phase, with greater acceleration and lower consumption.

#### Superior flexibility

The large strokes in all three axes enable maximum centring capacity and the possible reuse of the robot on IMM and molds of different sizes

	Model:	SM2-10
	Maximum payload [kg]:	6
	Vertical axis:	Direct
ì		

Campetella,
the right way

to save energy

Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S. H.S.I. 3DP Device V.O.S Jog Over



600

700

4.0

Pneumatic C-axis	•
Pneumatic C-axis + Pneumatic AB-axis	-
Pneumatic C-axis + Electric B-axis	-
Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis	-
Electric C-axis + Electric AB-axis	-

• Standard o Optional - Not available

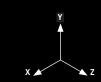
- Simply all in one SM2 X-Series requires no external palletisation axis or their relative pick-up hands, typically present in traditional side-entry robots. Its long travels on all three axes, together with the built-in wrist, allow the robot to carry out all pick-up, drop-down and palletisation operations with a single hand, in a sequential manner. Programming and managing the robots is extremely simple, avoiding the parallel coordination of an external palletisation axis.
- Say good-bye to issues involving transferring between pick-up hands Transferring parts between different pick-up hands is a very delicate operation, especially in multi-cavity applications, and loss of alignment and piece-dropping may occur. The presence of a single pick-up hand eliminates this problem at the root, preventing possible downtimes and consequent loss of productivity.
- Quick inversion of pick-up side In traditional side-entry robots, the position of the palletisation axis strongly determines the pick-up side on the fixed or on the moving surface of the IMM. The absence of palletisation axis, together with a tilting wrist, allows the SM2 X-Series robot to quickly invert the pick-up side on the fixed or on the moving surface, resulting in high flexibility in productions with change of mould.
- No more difficulty centring on different moulds and IMM The long travel on all three axes provides maximum centring capacity and the possibility to re-use the robot on IMM and moulds of different dimensions.

#### The high-versatility side-entry robot with maximum sturdiness

High-performance robot that can combine the typical productivity of side-entry robots with versatility features that are revolutionary for this category. Its unprecedented architecture, with a solid anchoring to the ground and plenty of travel in all three directions, is a change in the paradigm of flexibility of use for side-entry robots. Its structure is more rigid and massive than that of its little brother, the SM2, and it has a double support column and even longer travels. This means the possibility to run fast cycles with higher

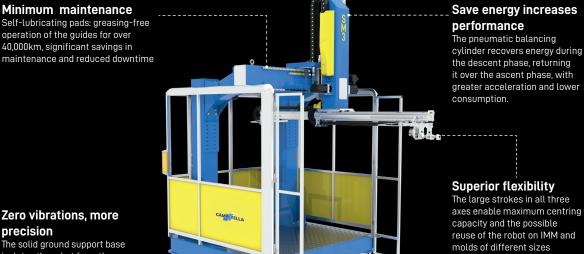


EVO Campetella's control unit



Minimum maintenance Self-lubricating pads: greasing-free operation of the guides for over 40,000km, significant savings in

payloads



Zero vibrations, more precision

The solid ground support base isolates the robot from the vibrations of the IMM

Model:	SM3 - 10	SM3 - 1D
Maximum payload [kg]:	12	2 axes x 6
Vertical axis:	Direct	
Vertical axis pneumatic balancing:	•	•
Z-axis stroke - Horizontal [mm]:	2400	2 axes x 2400
X-axis stroke - Extraction [mm]:	800	
Y-axis stroke - Vertical [mm]:	800	
Minimum cycle time with maximum load [s]:	6,0	



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S. H.S.I. **V.O.S** Jog Over



Pneumatic C-axis	•
Pneumatic C-axis + Pneumatic AB-axis	-
Pneumatic C-axis + Electric B-axis	-
Pneumatic C-axis + Pneumatic AB-axis + Electric B-axis	-
Electric C-axis + Electric AB-axis	-

Standard 
 Optional 
 – Not available

- Simply all in one SM3 X-Series requires no external palletisation axis or their relative pick-up hands, typically present in traditional side-entry robots. Its long travels on all three axes, together with the built-in wrist, allow the robot to carry out all pick-up, drop-down and palletisation operations with a single hand, in a sequential manner. Programming and managing the robots is extremely simple, avoiding the parallel coordination of an external palletisation axes.
- Say good-bye to issues involving transferring between pick-up hands Transferring parts between different pick-up hands is a very delicate operation, especially in multi-cavity applications, and loss of alignment and piece-dropping may occur. The presence of a single pick-up hand eliminates this problem at the root, preventing possible downtimes and consequent loss of productivity.
- Quick inversion of pick-up side In traditional side-entry robots, the position of the palletisation axis strongly determines the pick-up side on the fixed or on the moving surface of the IMM. The absence of palletisation axis, together with a tilting wrist, allows the SM3 X-Series robot to quickly invert the pick-up side on the fixed or on the moving surface, resulting in high flexibility in productions with change of mould.
- No more difficulty centring on different moulds and IMM The long travel on all three axes provides maximum centring capacity and the possibility to re-use the robot on IMM and moulds of different dimensions.
- Version with double transversal arm: even more functional SM3 X-Series is available in a version with double transversal arm (SM3-D), allowing for its use with particular stack moulds and providing advantages in IML applications with reduced IMM opening travel.

#### Redefines the concept of side-entry in multi-cavity applications

Characterised by ingenious and revolutionary mechanics, Concept X-Series is a game changer when it comes to the concept of productivity in the world of high-speed side-entry robots. Perfect with the use of voluminous pick-up hands, it is unbeatable in the most extreme applications with high number of cavities of light parts.



EVO Campetella's control unit



Smaller footprint Compact electrical panel, integrated on board

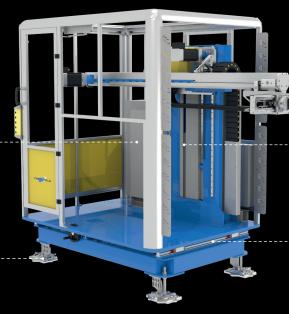
Zero vibrations, more

The solid ground support base

isolates the robot from the

vibrations of the IMM

precision



Carbon technology

Lightweight and resistant, the carbon fiber vertical axis guarantees extreme acceleration

#### Save energy increases performance

The pneumatic balancing cylinder recovers energy during the descent phase, returning it over the ascent phase, with greater acceleration and lower consumption.

#### Minimum maintenance

Self-lubricating pads: greasing-free operation of the guides for over 40,000km, significant savings in maintenance and reduced downtime

Model:	CONCEPT
Maximum payload [kg]:	15
Vertical axis:	Direct
Vertical axis pneumatic balancing:	•
Z-axis stroke - Horizontal [mm]:	2520
X Axis stroke - Extraction [mm] (linear section / at end of C axis rotation)	150/290
Y-axis stroke - Vertical [mm]:	670
Minimum cycle time with maximum load [s]:	4,0



Float Balanced Axis Carbon Technology Dynamic Vacuum

K.E.R.S. H.S.I. **V.O.S** Jog Over



C servo-driven with cam-operated mechanism (4)

(4) Rotation occurs at the end of the extraction movement - X axis

Standard ○ Optional - Not available

- Innovative, fast and efficient Concept X-Series boasts an unprecedented and innovative architecture, designed to combine maximum performance and efficiency. Its solid anchoring to the floor is the starting point for a highly stable robot without vibrations from the IMM. Its sturdy structure makes it possible to use powerful servo motors that can ensure powerful accelerations and low cycle times. Finally, an exclusive cam kinematic motion allows for the use of a single motor for the double linear extraction movement and wrist rotation, efficient from the electric power point 43 of view and extremely fast.
- Light and resistant materials from the racing world On the one hand, the frame that rests on the ground is robust enough to provide high stability. On the other hand, the moving parts are mostly obtained from highly resistant aluminium alloys, while the arms are made of carbon fibre. Accurately optimised profiles and geometries guarantee maximum resistance and reliability, all the while reducing inertias. In other words, Concept X-Series adopts highly sophisticated technical solutions, more commonly used in the aviation industry and in the world of motor racing, always in a quest for more extreme accelerations and speeds.
- Simply all in one Concept X-Series requires no external palletisation axis or their relative pick-up hands, typically present in traditional sideentry robots. The three axes are freely programmable, and together with the built-in wrist, they allow the robot to carry out all pick-up, drop-down and palletisation operations with a single hand, in a sequential manner. Programming and managing the robots is extremely simple, avoiding the parallel coordination of an external palletisation axis.
- Say good-bye to issues involving transferring between pick-up hands Transferring parts between different pick-up hands is a very delicate operation, especially in multi-cavity applications, and loss of alignment and piece-dropping may occur. The presence of a single pick-up hand eliminates this problem at the root, preventing possible downtimes and consequent loss of productivity.

#### The ultra-performing side-entry designed for maximum productivity

Modula X-Series is a side entry robot exclusively designed to reduce cycle time in the most extreme applications. Sturdy steel structure, light alloys and carbon fibre identify the DNA of mechanics conceived for maximum strain, to stand accelerations and speeds at the top of its range.



EVO Campetella's control unit



#### Smaller footprint Compact electrical panel, integrated on board

### Minimum maintenance

Self-lubricating pads: greasing-free operation of the guides for over 40,000km, significant savings in maintenance and reduced downtime



Zero vibrations, more precision

The solid ground support base isolates the robot from the vibrations of the IMM

Model:	MODULA 1	MODULA2
Maximum payload [kg]:	15	15
Strokes of main axes:		
1 - Z Axis - transversal [mm]:	2550	2970
2 - X Axis - extraction arm [mm]:	300	300
3 - Y Axis - additional extraction arm [mm]*:	300	300
4 - Unloading axis - vertical [mm]:	1300	1300
Minimum cycle time with maximum load [s]:	2.5	2.5

linked to the additional extraction arm (optional) - - see technical datasheet



Float Balanced Axis Carbon Technology **Dynamic Vacuum** 

K.E.R.S.

H.S.I.

**3DP Device** 

**V.O.S** 

Jog Over



Molded products unloading axis (linear shifting with servo motor + pneumatic rotation)

Standard ○ Optional - Not available

- Stable and anchored to the ground Just as in a racing car, Modula X-Series is the result of accurate design choices that focus on ensuring maximum accelerations and speeds in total stability. Its solid anchoring to the floor, made of welded steel mesh, is the starting point of a structure that is well anchored to the ground and detached from all vibrations coming from the IMM. Its support beam, fixed to the ground with stiff supports, is placed at a limited height from the floor level, ensuring a low barycentre and reduced jerky movements. All this translates into extremely robust mechanics, required to support the maximum strain of the powerful brushless servo motors of the moving parts.
- Light and resistant materials from the racing world On the one hand, the frame that rests on the ground is robust enough to provide high stability. On the other hand, the moving parts are mostly obtained from highly resistant aluminium alloys, while the arms are made of carbon fibre. Accurately optimised profiles and geometries guarantee maximum resistance and reliability, all the while reducing inertias. In other words, Modula X-Series adopts highly sophisticated technical solutions, more commonly used in the aviation industry and in the world of motor racing, always in a quest for more extreme accelerations and speeds.
- Innovative carbon fibre arm with twisted profile Just like the technology used in aircraft wings, Modula X-Series is equipped with carbon fibre arms with a bent profile with variable section, i.e. twisted. This solution gives the robot incomparable rigidity, practically eliminating all vibrations on the pick-up hand. The twisted profile with variable section allows for maximum reduction of arm range, which is particularly useful to reduce the opening travel (and the cycle time) in the IMM. In conclusion, it provides maximum precision in the most difficult working conditions with high payloads and minimum cycle times.

# MODULA Mini X-Series

#### The compact and ultra-fast side-entry

The little brother of Modula X-Series, the Mini model reduces travels and ranges, but certainly not its unmistakeable calling for maximum performances, all the while maintaining the powerful brushless servo motors and reducing the moving masses. Modula Mini X-Series is the fastest of Campetella's side-entry robots, allowing for cycle times close to 2 seconds.



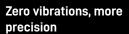
EVO Campetella's control unit

#### Smaller footprint

Compact electrical panel, integrated on board

#### Minimum maintenance

Self-lubricating pads: greasing-free operation of the guides for over 40,000km, significant savings in maintenance and reduced downtime



The solid ground support base isolates the robot from the vibrations of the IMM



Carbon technology

Lightweight and resistant, the carbon fiber vertical axis guarantees extreme acceleration

Model:	MODULA mini
Maximum payload [kg]:	10
Strokes of main axes:	
1 - Z Axis - transversal [mm]:	1600
2 - X Axis - extraction arm [mm]:	130
3 - Y Axis - additional extraction arm [mm]*:	130
4 - Unloading axis - vertical [mm]:	995
Minimum cycle time with maximum load [s]:	2

<sup>\*</sup> linked to the additional extraction arm (optional) - - see technical datasheet



Float Balanced Axis Carbon Technology Dynamic Vacuum

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K.E.R.S.

H.S.I.

3DP Device

V.0.S

Jog Over



Molded products unloading axis (linear shifting with

servo motor + pneumatic rotation)

Standard ○ Optional – Not available

- Stable and anchored to the ground Just as in a racing car, Modula Mini X-Series is the result of accurate design choices that focus on ensuring maximum accelerations and speeds in total stability. Its solid anchoring to the floor, made of welded steel mesh, is the starting point of a structure that is well anchored to the ground and detached from all vibrations coming from the IMM. Its support beam, fixed to the ground with stiff supports, is placed at a limited height from the floor level, ensuring a low barycentre and reduced jerky movements. All this translates into extremely robust mechanics, required to support the maximum strain of the powerful brushless servo motors of the moving parts.
- Light and resistant materials from the racing world On the one hand, the frame that rests on the ground is robust enough to provide high stability. On the other hand, the moving parts are mostly obtained from highly resistant aluminium alloys, while the arms are made of carbon fibre. Accurately optimised profiles and geometries guarantee maximum resistance and reliability, all the while reducing inertias. In other words, Modula Mini X-Series adopts highly sophisticated technical solutions, more commonly used in the aviation industry and in the world of motor racing, always in a quest for more extreme accelerations and speeds.
- Innovative carbon fibre arm with twisted profile Just like the technology used in aircraft wings, Modula Mini X-Series is equipped with carbon fibre arms with a bent profile with variable section, i.e. twisted. This solution gives the robot incomparable rigidity, practically eliminating all vibrations on the pick-up hand. The twisted profile with variable section allows for maximum reduction of arm range, which is particularly useful to reduce the opening travel (and the cycle time) in the IMM. In conclusion, it provides maximum precision in the most difficult working conditions with high payloads and minimum cycle times.

## a X i X-Series

#### The majestic, sturdy and quick side-entry

The bigger brother of Modula X-Series, the Maxi model increases travels and ranges, all the while maintaining its unmistakeable calling for maximum performances. Designed to support high payloads with reduced cycle times, it is amazing in action due to the powerful accelerations provided to the heaviest and most voluminous parts.



EVO Campetella's control unit

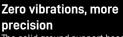


#### Smaller footprint

Compact electrical panel. integrated on board

#### Minimum maintenance

Self-lubricating pads: greasing-free operation of the guides for over 40,000km, significant savings in maintenance and reduced downtime



The solid ground support base isolates the robot from the vibrations of the IMM



Carbon technology

Lightweight and resistant, the carbon fiber vertical axis guarantees extreme acceleration

Model:	MODULA maxi
Maximum payload [kg]:	25
Strokes of main axes:	
1 - Z Axis - transversal [mm]:	3225
2 - X Axis - extraction arm [mm]:	400
3 - Y Axis - additional extraction arm [mm]*:	400
4 - Unloading axis - vertical [mm]:	1240
Minimum cycle time with maximum load [s]:	5

<sup>\*</sup> linked to the additional extraction arm (optional) - see technical datasheet



Float Balanced Axis Carbon Technology **Dynamic Vacuum** 

K.E.R.S.

H.S.I.

**3DP Device** 

**V.O.S** 

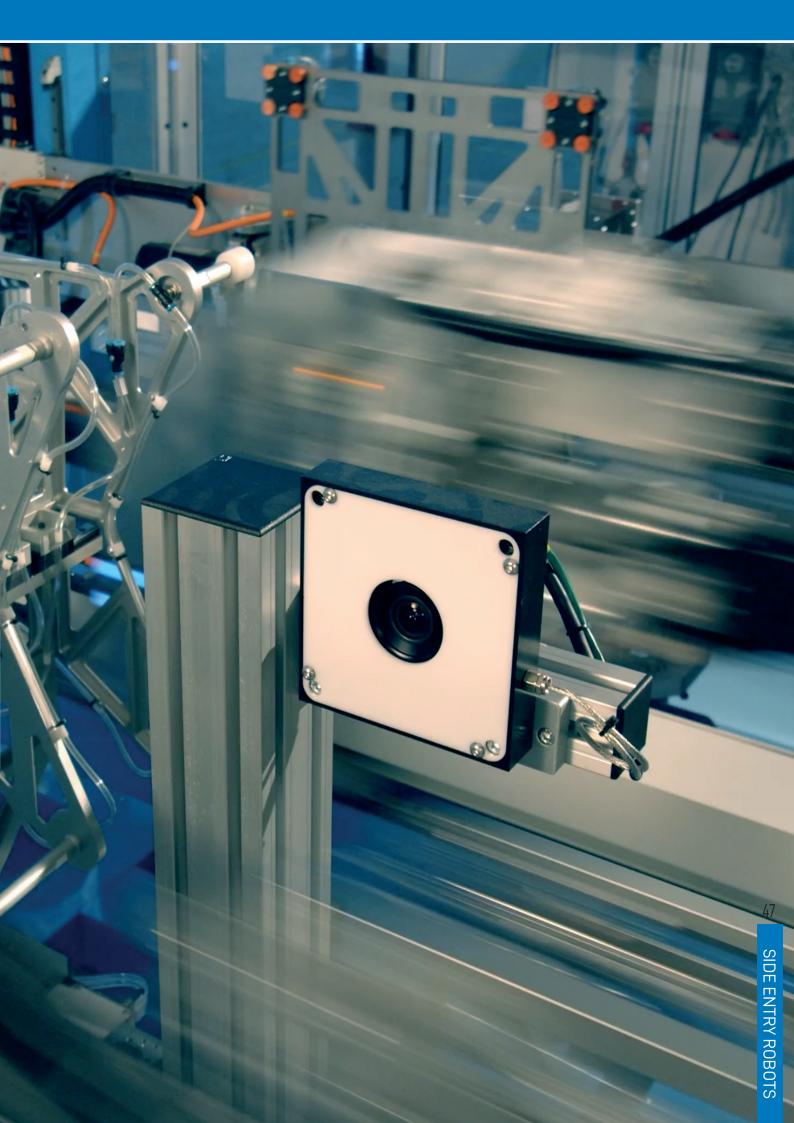
Jog Over



Molded products unloading axis (linear shifting with servo motor + pneumatic rotation)

Standard ○ Optional - Not available

- Stable and anchored to the ground Just as in a racing car, Modula Maxi X-Series is the result of accurate design choices that focus on ensuring maximum accelerations and speeds in total stability. Its solid anchoring to the floor, made of welded steel mesh, is the starting point of a structure that is well anchored to the ground and detached from all vibrations coming from the IMM. Its support beam, fixed to the ground with stiff supports, is placed at a limited height from the floor level, ensuring a low barycentre and reduced jerky movements. All this translates into extremely robust mechanics, required to support the maximum strain of the powerful brushless servo motors of the moving parts.
  - Light and resistant materials from the racing world On the one hand, the frame that rests on the ground is robust enough to provide high stability. On the other hand, the moving parts are mostly obtained from highly resistant aluminium alloys, while the arms are made of carbon fibre. Accurately optimised profiles and geometries guarantee maximum resistance and reliability, all the while reducing inertias. In other words, Modula Maxi X-Series adopts highly sophisticated technical solutions, more commonly used in the aviation industry and in the world of motor racing, always in a quest for more extreme accelerations and speeds.
- Innovative carbon fibre arm with twisted profile Just like the technology used in aircraft wings, Modula Maxi X-Series is equipped with carbon fibre arms with a bent profile with variable section, i.e. twisted. This solution gives the robot incomparable rigidity, practically eliminating all vibrations on the pick-up hand. The twisted profile with variable section allows for maximum reduction of arm range, which is particularly useful to reduce the opening travel (and the cycle time) in IMM. In conclusion, it provides maximum precision in the most difficult working conditions with high payloads and minimum cycle times.



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