

EPISTOLIO

painting robot



EPISTOLIO s.r.l

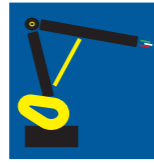
robot division

via Piemonte, 120 - 21100 Varese - ITALY • tel. +39 0332 212692 • fax +39 0332 223666

mail: info@epistolio.com • www.epistolio.com

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EPISTOLIO ROBOT



Technical Features

EPISTOLIO ROBOTS are engineered and constructed using innovative materials and updated technological solutions, in order to be among the most flexible and user friendly machines in the market.

PROGRAMMING SYSTEMS

Epistolio painting robots can be equipped with different programming system, such as:

- **SELF-LEARNING:** Through this system is possible to use the structure of the robot, which is very light and balanced, to make a first painting of the pieces. Our control system will record the movements and all the signals and will store them in a program which can be executed automatically by the robot.
- **POINT TO POINT:** For pieces which are geometrically defined by regular surfaces bounded by segments, circles or curves, will be possible to create the painting program just selecting some significant points on the object and connecting/elaborating them through a simple software developed by Epistolio.
- **AUTOMATIC SCANNING SYSTEMS:** For those Customers which are looking for totally automatic solutions, Epistolio has developed vision systems of photocells, cameras and lasers which are able to define the shape and the dimensions of the surfaces to be painted and to automatically create the related painting programs.
- **OFFLINE:** Epistolio has developed different software tools for offline programming of the robot.

In this case the robot is programmed as a CNC machine. A CAD/CAM software is importing the 3D drawing of the piece and is generating the robot path.

Through a simulator, is possible to verify the movements of the robot and the results of the painting from the computer, before executing the program automatically.

REMOTE ASSISTANCE

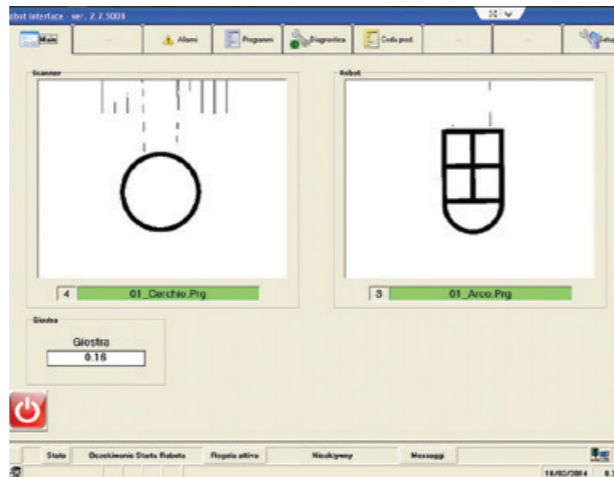
All Epistolio robots are equipped with a software for remote-assistance which allows our Customers to connect through the web to our diagnostic center, in order to get some software update or modifications or in order to diagnose eventual faults in the machine.

SOFTWARES FOR THE MANAGEMENT OF THE PRODUCTION

By request our robots can include a software which assist the Customer in the scheduling and monitoring of its production line.

Our softwares include the possibility to control the robot and the entire line through barcode or RFID systems and to get detailed reports about the production.

Moreover, we can automatically control the processes of changing colors and set the painting parameters.



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General Industry Applications



METAL

Metal painting applications can refer both to liquid and powder painting. The typical painting line where our robot are installed is composed by a conveyor where the pieces are hanged, moving continuously or stop & go.

The robot is able to replace a manual operator, ensuring high productivity and quality levels, or can operate as an integration of the reciprocators, retouching the parts which are not completely painted.

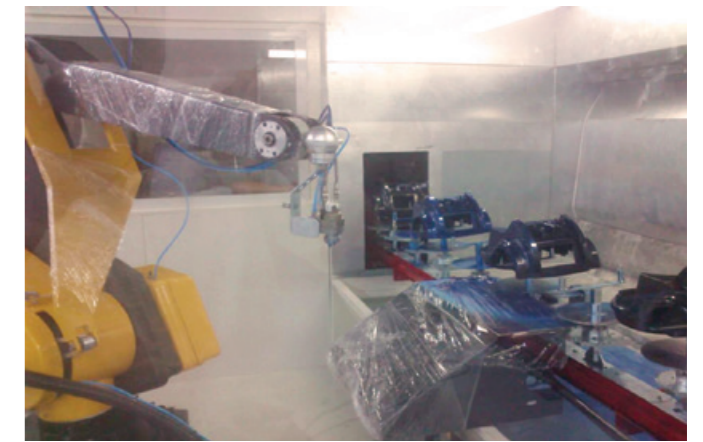


CERAMIC

Many Epistolio robots are operating in the ceramic industry, for the automatic glazing of sanitarywares.

In this sector we propose complete systems with robot and rotating carousel, programmed by self-learning.

The modularity of our robots facilitate their use in most of the applications.



PLASTIC

In the plastic sector Epistolio offers different type of solutions both for small, medium or large productivities.

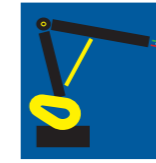
Our robot can be integrated with a rotating carousel, where the operator will load and unload the pieces or it can be equipped with a rotation device, which can be mounted in front of a reversed conveyor.



CUSTOMIZED SOLUTIONS

Our company is able to offer turn-key solutions, studied for any specific application.

Our complete plants include one or more painting robots, automatic systems for handling and moving the pieces, softwares for the management of the production and for the integration of any painting equipments.



robot MRK 6.0



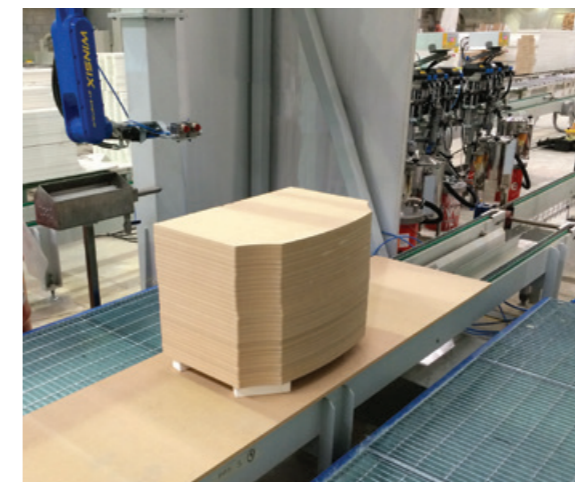
Epistolio is able to engineer robots and customized solutions to paint chairs, window frames, doors, assembled furniture, profiled panels and edges of panels on stack, coffins and any kind of wood components.

According to customer needs Epistolio supplies robot to be installed on:

- rotating carousel.
- aerial or reversed conveyors (existing or new) .
- rollers and chains conveyors.
- belt conveyor systems.
- customized handling systems.

With our specialized partners and our experience, our staff is able to study and supply complete solutions for painting. The Robot can be equipped with motorized carriages (7th axis) and with any lacquer feeding systems as pumps, guns and colour change groups.

robot WINSIX





■ User friendly programming

■ Flexible

■ Maximum availability

MULTIPLE PROGRAMMING SYSTEMS. Our robot MRK 6.0 can be programmed through self-learning, for a fast and easy painting of objects with complicated shapes, or through point to point, for a more accurated painting on geometrically simple pieces.

VARIOUS ROBOT CONFIGURATION. MRK 6.0 can be integrated with multiple devices which are engineered and produced by EPISTOLIO Srl. These devices include carousels systems, external carriages and rotation devices.

DIFFERENT ARMS LENGTH. The same robot model can be produced with different arms length, in order to perfectly fit with the dimension of the pieces to be painted and the available space in the spraying booth.

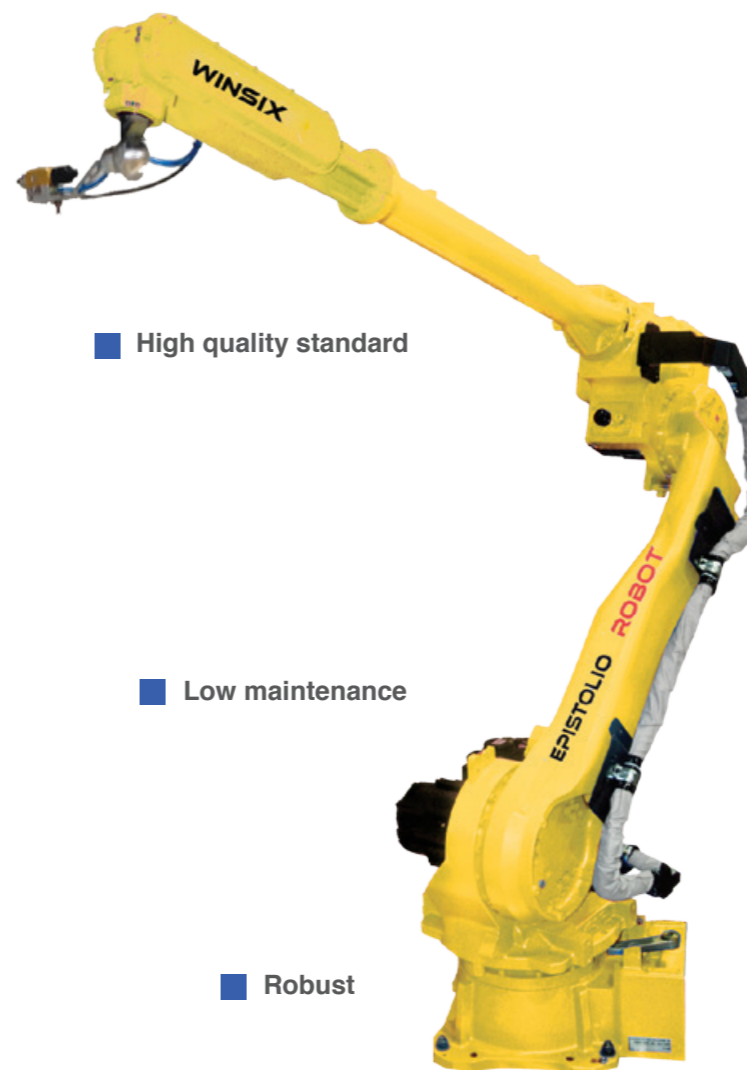
SUPERIOR MANEUVERABILITY. The robot arms are built with very light but strong materials and are pneumatically balanced in order to achieve high levels of maneuverability during the programming stage.

HIGH QUALITY. Our robot MRK 6.0 is built with high quality materials and parts. Each mechanical component, driver, motor and gearbox come from the most important brands in the industry, in order to ensure to the robot a long operative life.

CUSTOMIZED SOFTWARE. Our multilingual software which manage the robot has entirely been developed from our company and it can be customized in order to perfectly meet the requirements of the Customers. Moreover it includes a module for the management of the production filled with statistics and data.



Our **robot WINSIX** is our top of the range robot, used for applications with VISION SYSTEMS or OFFLINE PROGRAMMING or when is requested a particular precision in the painting process.



■ High quality standard

■ Low maintenance

■ Robust

Our WINSIX robot is fully integrated with one of our softwares, in order to offer to the Customer a complete solution.

EPISTOLIO offers different type of vision system and softwares for the elaboration of the images:

DIFO-WINVISION: it is a 2D (optional 3D) system used in for the automatic painting of windows and doors. DIFO-WINVISION is able to scan the image of the windows while they are moving on the conveyor and to send the data directly to the robot, who will immediately elaborate them and create the painting program, using some parameters set by the operator.

DIFO-3DVISION: it is an hardware and software package for the analysis and partitioning of 3D surfaces through cameras or laser scanners. The primitives generated by the software are processed in order to obtain an optimized painting path.

Depending from the type of pieces to be painted, different recipes can be saved by managing numerous parameters of robot and spraygun set.

DIFO-SIMULATION: This software allows to make the robot programming using only a personal computer. The robot is programmed like a CNC machine, starting from a CAD/CAM base which is used to import the 3D drawing of the piece to be painted and generate the path of the tools. After this, DIFO-SIMULATION allows to simulate the created program in a 3D environment and to convert it into the language of the robot.

■ WINSIX specifications

Controlled axes	6
Max payload (kg)	20
Repeat. pos. accuracy (mm)	+/- 0,15
Max working range (mm)	R=3106
Temperature (°C)	0 to +45
Relative humidity (%)	20 - 80
Weight (kg)	495
Power supply, average (kVA)	3,5

