

The development of robotics has led MATRASUR Composites to widen its equipment offer, manual and automatic by integrating an internal Robotic Service in the company completely dedicated to the design of robotic solutions.

The new generation of robots from MATRASUR Composites covers all stages of production of composite parts: gelcoat spray-up, resin spray-up, simultaneous spray-up of resin & fibreglass, demoulding agent spray-up, handling systems, part trimming & machining and soon robotic rollout.

ROBOMAT line *Spray-up with simplified programming*

Our **Robomat** line is composed of robots designed for spray-up applications with a simplified technology consisting in the copy of the operator's gesture by the robot. Once the movement has been "learnt", the robot is able to reproduce it endless number of times, with the possibility of increasing speed by 20%.

Application fields: Spray-up of gelcoat, barrier coat, demoulding agent, simultaneous spray-up of resin & fibreglass.

Main assets:

- Simplified programming not requiring qualified personnel
- Constant layer thicknesses
- Adapted for small to medium size series in industries such as swimming pool, sanitary ware, boat, among others
- Flow rate and raw material control is possible for each part



ROBOSTRAT Line *High-rate and high-speed spray-up of complex shaped parts*

The range of robots type **Robostrat** offers advanced technology spray-up based in in-line programming with the help of simulation software. This family of robots can work at speeds exceeding human capacity and offer excellent repeatability.

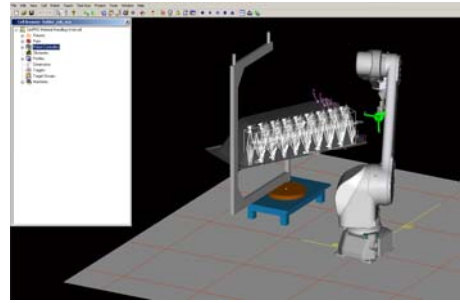
Application fields: Spray-up of gelcoat, barrier coat, demoulding agent, resin, resin & fibreglass simultaneously.

Main assets:

- Excellent precision and regularity
- Adapted for high-rate spray-up
- Can handle parts of complex shape such as parts from the industry of sanitary ware, boat, among others
- Offers a wide range of operating spray-up speeds



In-line programming: A programme specially designed based on a virtual robot controller makes it possible to create and test 3D robotised systems and spray-up programmes according to desired parameters of covering capacity, speed, type and angle of spray fan. With this software it is possible to import CAO documents and to simulate the entire spray-up process of a part before its actual implementation.



Robost type USIMAT *Trimming and machining of industrial parts*

The **Usimat** line integrates robotised machining and trimming operations of finished parts into the production process. This type of robot is capable, according to its configuration, to detect the position of the part in space before trimming.

Application fields: Trimming and machining of composite parts– All industries.

Main assets:

- Large diversity of tools for each application: drill, mill, reamer, disc diameters 40 to 400, etc.
- Automatic tool loading and safety pneumatic powered motor
- Part scanning and three-dimensional repositioning in space (optional)
- Positioning of complex parts with the help of a 7th axis that can be either a rotating axis or a linear axis according to the application (optional)



Robot type MANUMAT *Handling and palettisation of parts*

The robot type **Manumat** is specially designed to perform all kinds of part handling operations in the workshop. The integration of this robot in a line results in optimised cycles controlled transfer times of a part from one station to the other. It also guarantees handling accuracy. The **Manumat** robot can be use for palettisation.

Application fields: All composite workshops.

Main assets:

- Optimised part flow in the workshop
- Part handling in reduced spaces possible
- Palettisation possible
- High precision and control over cycle times



Robot type VISIOMAT *Robot with detection laser*

This robot represents one of the latest technical developments. With the help of a camera and a laser the **Visiomat** robot is capable of detecting the position of an object in space. Once the object has been detected, the robot can lift it and put it back down in a specific place in a repeated way.

Application fields: All industries. Has already proved its performance in the sanitary ware industry in particular.

Main assets:

- Object position detection through numerical camera
- Possibility of implementing simple and suited programmes
- High positioning precision
- Palettisation possible

To come : Rollout operations also robotised!

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