

More functionality with **CUGHER GLASS** industrial robots

Optimizing processes while signaling a shift towards comprehensive automation, CUGHER GLASS enhances both precision and safety with its industrial robotics. A true pioneer in glass manufacturing, the company's expertise now integrates robotic arms with vision systems - always with a customer-centric approach that offers tailored solutions.

The complexity of highly-synchronized and automated screen printing lines designed by Cugher over its decades of activity has inevitably led the company to add robotic solutions to its offer. All true allies of humans today, they are essential now to the modern industry.

ROBOTIC ARMS

Industrial robots -or, in this specific context, robotic arms- initially developed to overcome the limitations of traditional methods. Nowadays they are essential tools for simplifying complex or dangerous operations. The technology itself brings numerous benefits. On one





hand, processing quality improves because operations are more precise, fast, and uniform. On the other, labour costs decrease in comparison to manual activities, as well as the direct risks for operators related to the handling of hazardous tools or materials diminish. Last but not least, the quality of the operator's work improves, given that they now act as supervisors of technology rather than direct executors of repetitive and exhausting tasks.

AUTOMATED SCREEN PRINTING

Cugher was among the first companies in the world to automate the screen printing process on flat glass.

Indeed the recent introduction of robotic applications, made possible by years of specialization in industrial automation, demonstrates the company's full intent to pursue progress and to provide its customers with increasingly comprehensive systems that increase efficiency and decrease process costs. Here Cugher adds to its offer multifunctional and versatile devices, for which hardware depends upon the choice of robot supplier (including such prominent names as ABB, Fanuc, Kuka), with software programming directly managed by Cugher professionals - all experts in writing various codes acquired through specific training.

PARTNERING WITH CUSTOMERS

The consultancy approach Cugher adopts with its customers leads to the optimal solution for robot purchase through a dedicated study for each project. That includes careful evaluation of specifications, available spaces, existing or future machinery, and the requisite (exclusive) feasibility studies from potential robot application suppliers. Often, however, it is the customer, already a user of robotic solutions, who chooses the supplier, and in such cases, Cugher adds its know-how for both code writing and tool manipulation design. In the landscape of flat glass plants, and more generally

in the industry of handling sheets of different materials, Cugher proposes the use of anthropomorphic robots with up to six axes of movement - allowing great flexibility in operations. However, what defines the robot within the plant is the tool, the instrument placed at the end of the robotic arm, which is designed to manipulate objects and is specific to the required processing/movement - thus allowing the applicability of the technology. Along with the tool, Cugher experts evaluate, design and produce -if necessary- all the surrounding handling based on the operation required by the specific production line specifications. In this way, Cugher is both an integrator of robotic



solutions and a single supplier for the entire screen printing line, from loading to unloading.

SOLUTIONS

Cugher implements two families of solutions in its projects, namely robotic islands for material handling and coupling the robot system with vision systems. Robotic islands are machine sets organized within an automatic working area. They include robot manipulators that are controlled automatically. Among robotic islands, Cugher successfully designs mainly loading/unloading and palletizing islands, en-

suring the continuity of operations. Through robotic islands, productivity increases significantly, and each island can always be quickly converted if the company needs to change the type of processing. The solution that includes coupling the robot system with vision systems guarantees a constant quality standard because the vision system communicates essential information in real-time to the robot, which reacts accordingly. This combination proves effective when automatic handling is not always precise, while processing requires extremely accurate positioning. The

robot collaborates with the vision system to make different adjustments each time. Vision systems have always been an integral part of Cugher's product range, but the company has the necessary expertise to integrate third-party systems with its robots. Cugher has built its reputation by always putting the customer first. Here the introduction of functional robotic technology into its projects shows the company's commitment to being an increasingly solid and competent partner in every aspect. Screen printing plants and the handling of flat glass have been the

productive soul of the company until now, but today Cugher is proud to announce its commitment to be a turnkey supplier and/or integrator of automated robotic solutions.

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