



spraying robot and automation systems

*complete and customized solutions
for all needs*

CAF[®]
robotics

automatic painting



LEADER IN SPRAYING AUTOMATION

Since 1994, CMA ROBOTICS has been designing and manufacturing innovative and complete solutions for industrial coating. Since the first robot was designed, has CMA had a strong presence in more than 60 countries around the world and is active in all sectors of application. The head office is located in Pavia di Udine, Italy, where there are management and administrative offices, research and development, sales and marketing, after-sales service, production, and purchasing, technical and software departments. In 2021, the new spraying laboratory was launched, where tests and simulation trials are carried out in total safety, providing the possibility of previewing the result of the application performed by the robot on the desired product.

In addition, CMA Roboter, located in Drolshagen, Germany, manages and cares for the German market, while CMA Robotics China, located in Wuhu, is the reference point for the Asian area. CMA is part of the holding company Efort W.F.C, Europe's largest robot integrator in the automotive, general industry, coating and electronic control components sectors.

CMA ROBOTICS is also a member of SIRI (Italian Association of Robotics and Automation) and Acimall (Association of Italian Manufacturers of Machinery and Accessories for Woodworking), so it actively participates in the development and promotion of the culture of robotics and automation throughout Italy and abroad.



COMPLETE INSTALLATIONS AND CUSTOMISED SOLUTIONS

Thanks to the collaboration with the market's leading suppliers, is CMA Robotics able to offer to his customer complete systems and spraying equipment in a fast and efficient service, that includes all necessary services. The benefit is to have a single technology partner who is fully committed to the whole process and is able to provide direct and active support.





efficient and innovative









EFFICIENT AND INNOVATIVE PRODUCTION SYSTEM

For CMA Robotics, being both producer and integrator in the world of robotics means not only manufacturing each machine according to the customer's needs, but also taking care of its final integration in advanced and complex production systems and procedures. For CMA, each system is designed and customized for the

customer, supported from the early stages of the project through to post-production support. Direct control, quality of performance, flexibility and speed of implementation are the strengths that distinguish CMA Robotics.



quality, efficiency, innovation

PROGRAMMING	POINT TO POINT							
	SELF-TEACHING							
								
Model	GR 630	GR 650	GR 610	GR 680	GR 6100	GR 6100 HW	GR 6160	GR 6150
N° Axes	6	6	6	6	6	6	6	6
N° External Axes	6	6	6	6	6	6	6	6
Pay-Load Kg	3	5	10	8	8	10	16	15
Working Area mm	1900	2200	2000	2700	3700	3500	3200	3300
Mounting	Floor-Ceiling	Floor-Ceiling	Floor-Ceiling	Floor-Ceiling-Wall	Floor-Ceiling	Floor-Ceiling	Floor-Ceiling	Floor-Ceiling-Wall
Ip-Class	IP 65	IP 65	IP 65	IP 65	IP 65	IP 65	IP 65	IP 65
Gas Explosion Protection	II 2 G EEx p II T4	II 2 G EEx p II T4	NO	II 2 G EEx p II T4	II 2 G EEx p II T4	II 2 G EEx p II T4	NO	II 2 G EEx p II T4
Dust Explosion Protection	II 2 D Ex pD 21 T65° C	II 2 D Ex pD 21 T65° C	NO	II 2 D Ex pD 21 T65° C	II 2 D Ex pD 21 T65° C	II 3D Ex pxb IIIC T 135 C Db	NO	II 3D Ex pxb IIIC T 135 C Db
Version St: Standard Version G: Carousel	ST/G	ST/G	ST	ST/G	ST	ST	ST	ST

ADVANTAGES OF CHOOSING CMA

CMA offers a range of highly specialized industrial spraying robots with international ATEX Zone 1 and 2 (gas) Zone 21 and 22 (dust) and IECEx Gas certifications. CMA Robotics' coating robots are perfectly suitable for any type of system, integrating into the existing industrial process, whatever the production capacity or the size of the product to be mass-produced.

Automation from CMA gives companies a competitive advantage through higher and more sustainable product quality, increased output and reduced total costs. Opportunities for increased productivity and production innovation. It also introduces the opportunity to improve safety and job satisfaction, while allowing roles that are more appealing for workers and encouraging job growth.



smart programming



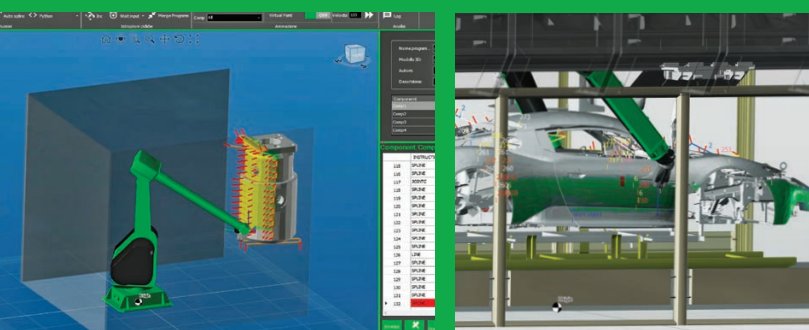
SELF-TEACHING

The operator manually guides a special robot that is suitably relieved and balanced with a sophisticated electronic and pneumatic system, performing a complete spraying cycle on a sample part. All the trajectories and commands executed are memorized on the control computer and then reproduced accurately at the required execution speed. This approach makes the use of the robot very user-friendly, as no complicated programming steps are necessary. Trajectories can easily be deleted or modified at a second stage. This process also makes it very intuitive and simple to finish parts of more complex shapes and sizes.



VR-TRACKING

This is an evolution of the self-learning system in which the robot moves manually. In this case, the robot is not moved, but a special joystick is used, which is very light and maneuverable, to which the spray gun is attached. The trajectories are acquired by a series of sensors and memorized to create the complete painting program; in short, the painter manually paints an initial piece so that a common CMA robot can replicate it.



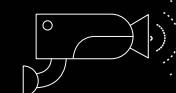
OFFLINE

Simulation of the spraying cycle with 3D graphics of the sample to be coated showing details such as the depth of material applied. In this way, a realistic reproduction of the complete spraying cycle is displayed and all the parameters can be set to optimize the process directly from the computer workstation. This means that any changes can be transmitted to the robot in real time without interrupting the process.

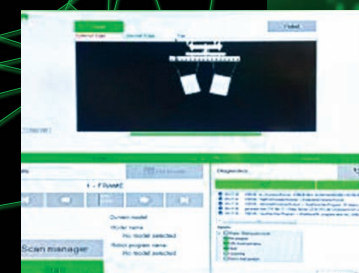


POINT TO POINT

Using the supplied Mobil Panel, all the points of the spraying program are stored in order to create cycle trajectories and set parameters to optimize the final result. The robot itself can also capture these points manually. With this technique, the robot can work on small objects and series as well as large elements of any size.



AXPS



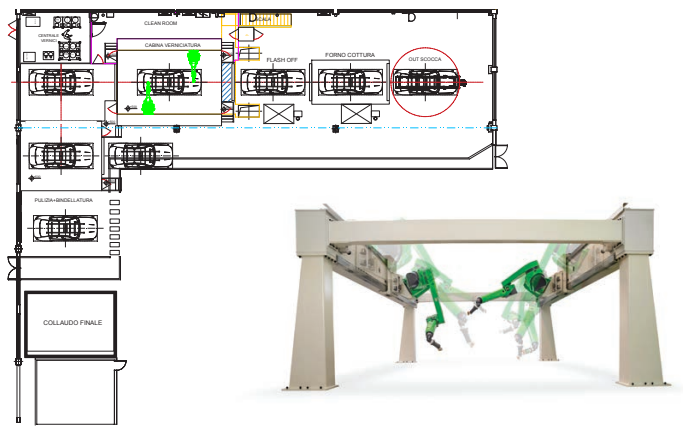
SELF-GENERATION (AXPS)

The removal of manual programming of work cycles. This is a form of artificial intelligence, in which robots use 2D or 3D vision systems to view the object to be sprayed and, thanks to special CMA software, generate the spraying program. This intelligent and automatic process eliminates the time-consuming and laborious programming phase. The robot is able to create a spraying program on its own without the need for human intervention.

sectors and applications



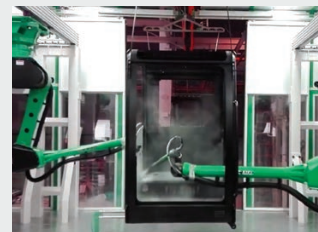
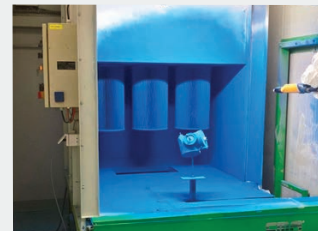
AUTOMOTIVE



METAL



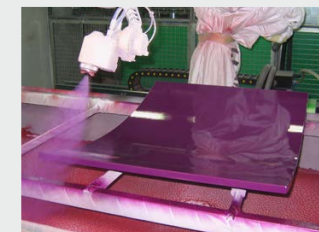
POWDER



PLASTIC



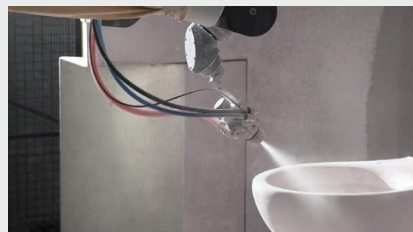
WOOD



GEL COAT

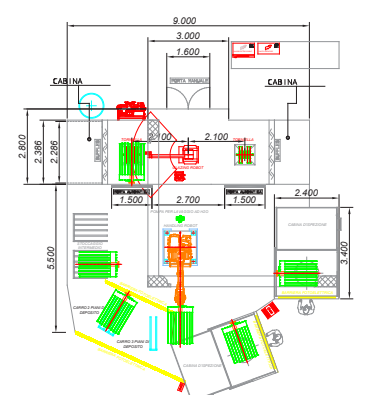
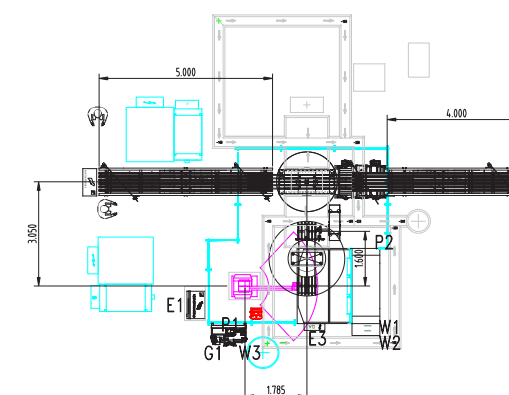


CERAMICS



SECTORS AND APPLICATIONS

The experience of CMA Robotics, also referenced by large national and international companies, guarantees ever increasing and exclusive professionalism and knowledge. From the automotive, wood and metal industries to ceramics and plastics, there is no sector in which CMA Robotics has not gained experience.





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