



# PROFESSIONAL CUSTOMIZABLE 3D PRINTERS

## Mark One and the Technological Progress of 3D Printing to Support Companies

Mark One is an innovative company based in Cesena, Italy, that produces 3D printers for the industrial world and collaborates with multinationals, SMEs and universities both in Italy and abroad. When we talk about progress, it is only proper to mention the prestigious Cesena-based reality that is revolutionizing the world of Racing: Mark One, after introducing the world's first 3D printer in the Superbike race boxes with the Yamaha GRT team, thanks to its expertise has become the technical sponsor of Kawasaki Racing Team, composed of 6-time champion Jonathan Rea.

The company, in fact, wants to be a leader in technology. How? By creating it. In fact, all innovations developed in-house are born to optimize companies' industrial processes. Mark One understands the real needs of its partners and provides the optimal 3D printer customized in terms of Hardware, Software and Services for high-performance use and a quicker return on investment. For example, in certain cases, by making certain changes to the machine, partners have benefited from a 40 percent reduction in production time.

Mark One, therefore, works alongside the partner through the entire process, from the initial concept to the final product, offering a 360-degree service and support package, from finding the right machine to choosing the materials to print, to introduce additive technology within the production processes and enable the technical team to excel in the use of 3D printing through the transferred know-how.

Over the past 10 years, more and more manufacturing companies have chosen to adopt 3D printing technology to lean and optimize their supply chain. This relates to the fact that companies are demanding more and more customized components, in increasingly smaller lots and shorter lead times. This trend shows how important it is for 3D printer manufacturers to excel in two main aspects: customization and flexibility. To respond to the trend, therefore, innovation is needed. And those who are following this path are Mark One.

So, what has Mark One done to address the above market needs? The company developed a proprietary mainboard to make its own machines smart. In fact, the mainboard allows real-time control of the entire



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printing process, from the production cycle to the thermal cycle of the component. Thanks to the innovative user interface, every single parameter can be controlled: reel management, quantity and type of material loaded, status of extruders by temperature and life cycle. The machine detects any errors, self-corrects in full autonomy, and resumes printing without stopping, 24/7, and thanks to predictive maintenance also optimizes machine downtime. It also understands when the printing material is running out, replaces it, and loads a second reel of material. Again, in complete autonomy, without requiring the intervention of an operator. There are additional features: the ability to remotely track the printing of the component via webcam, to upload print files to the queue and get an analysis on timing to plan production, and, finally, that of managing individual user access to map the use of different operators. Mark One also has several different patents. One among them involves the dual extruder, the heart of 3D printers in handling the different geometry complexities that can be realized with technical materials. The goal is to enable the creation of complex and resilient objects so as to generate infinite application scenarios. The combination of these innovations enables the creation of components with complex shapes and geometries that perform more efficiently, to be used not only in research and development but also in production.

An increasing number of manufacturing companies are relying on Mark One to provide all the support and tools they need to revolutionize their production processes and make the transition to a leaner supply chain. The benefits that have emerged for each industry are many: drastically reduced production costs and time, increased productivity and efficiency. As stated by Marco Zani, Founder & CEO of Mark One, "I have always thought that this technology could change the world, and every day I am working to make it happen."