

## Rapid, High-Precision Measurement of Templates and Gauges

*Italian company manufactures control and industrial automation templates, and offers a wide range of measurement services on behalf of third parties in the automotive and aerospace sectors*



[M.D.C. DESIGN srl](#) is a young, dynamic company that firmly believes in sharing individual experience with the entire group, and developing the highest quality standards in design and production. Thanks to years of experience in the mechanical sector, M.D.C. DESIGN has become a top supplier in the market of control and industrial automation templates for the automotive and aerospace sectors. With highly innovative technological solutions, M.D.C. DESIGN services all those who believe in technological progress based on experience, with a sharp focus on the future. They carefully plan in respect of specifications and latest generation machinery, and provide support throughout the product development cycle.

Shared solutions, prompt production times and post-sales service are the primary elements for consolidating customer relationships. After thirteen years of constant market growth, the strong demand encouraged the company to create control machinery using the most sophisticated electronic instruments, capable of directly communicating the gathered data. Thanks to continuous investments in technology, both in the planning and implementation sectors, M.D.C. DESIGN now implements the most modern software and specific machinery, therefore meeting the needs of the sector and offering a wide range of measuring instruments made with resins, aluminum blocks and aluminum/steel alloys.

The offering ranges from simple measuring support to complex automatic instrumentation using pneumatic and electronic components. Expert designers and the most advanced production equipment ensure high-quality and repeatable results. The measuring department guarantees dimensional certification and the quality of the equipment produced. M.D.C. DESIGN is certified in accordance with the ISO 9001:2015 standard.

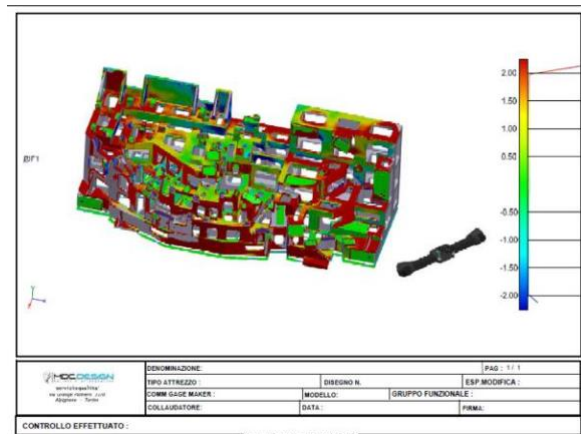
### Advanced Quality Control Systems



*Measuring large size equipment*

Following the expansion and renovation of the systems, the next obvious step was reaching the highest national and international standards in the sector in order to offer a more efficient and custom service. All of this was made possible thanks to new investments dedicated to the measuring sector. The company was looking for an instrument that could reproduce components and parts in 3D and transform data into simple indications.

The need for more accurate controls and dimensional measurements for production components has become a *must* in the automotive sector. Moreover, the need for constructing larger equipments inspired M.D.C. DESIGN to develop more versatile, rapid products that can guarantee maximum precision. To reach this goal and expand the range of services offered to customers, the company evaluated several measuring technologies, including scanners on measuring arms and optical digitalization instruments. Numerous tests were carried out for accuracy and repeatability. But the systems tested demonstrated a lack in reliability and accuracy. After careful research, M.D.C. DESIGN decided to invest in Creafom's MetraSCAN 3D and HandySCAN 3D scanners, in the portable CMM HandyPROBE, and in the Metrologic X4 software, to manage the scanning and measuring of the jigs and components in the 3D measuring sector. The new equipment was also used for controlling large size equipment, a task that is virtually impossible to carry out using manual measuring instruments. Other



Metrolog X4 measurement ratio

applications consist in controlling plastic elements and detecting data on raw materials, allowing M.D.C. DESIGN to use CAD files directly in the CAM process, with accurate calculations of excess material.

Creaform's [portable measuring systems](#) offer significantly better performance when compared to traditional portable CMM instruments, even on the shop floor. Thanks to their portability and insensitivity to the typical working conditions found on the shop floor (e.g. movements, installations and vibrations), Creaform's solutions are highly efficient for measuring items that are difficult to move. They are perfect for control, measurement and reverse engineering.

### Reasons Behind the Choice

In the past, measurement controls were carried out using traditional manual measuring instruments. Creaform was selected for its functionality and advantages: flexibility, portability, speed, ease of use, all with flexible configurations in any environment, improved quality, faster process and user-friendly software. With older CMMs, M.D.C. DESIGN could not scan and was therefore limited by dimensions, and lack of flexibility and portability. The world of measurement is full of valid alternative solutions, but the versatility of Creaform's products convinced everyone on the team and was the main reason behind this choice.

The new devices were used by M.D.C. DESIGN not only in the measuring room, but also in other departments and at customer facilities. The use of the new systems has significantly accelerated measurements and improved the level of quality. This allowed the company to meet customer demands that it could not handle previously. The use of this new innovative system resulted in several important advantages: a wider scanning area without limiting the detection of any type of shape and surface, and a total freedom of movement. In fact, the HandySCAN 3D is very light and can be easily transported to other facilities to offer customers the highest level of service.

In conclusion, as summed up by the M.D.C. DESIGN management: "Creaform was selected because it perfectly responds to the fundamental concepts at the basis of our mission: high speed and precision. We are extremely satisfied with our choice, also because of the technical support and well-trained personnel."



### Creaform in Italy

Creaform is a world leader in portable 3D measuring solutions and engineering services, with offices in Milan and resources to meet the ever-growing demand of its clientele and local partners in Italy, the third European market for metrology. In response to the growing demand in the market, an entire team of specialists is at the disposition of customers. The local offices also provide measurement services in all of Italy, and thanks to dedicated product marketing initiatives, the company offers its skills in measurement and 3D measurement solutions.

The company is ready to share its innovative solutions and know-how, making sure its customers overcome any production and quality control challenges, with services such as 3D scanning, reverse engineering, quality control, non-destructive testing, product development and numerical simulation (FEA/CFD).

[www.creaform3d.com](http://www.creaform3d.com)