

Quality without compromises

With the Micro Compact NT laser measuring system from Blum-Novotest, Ferrari Technology achieves ever increasing precision in the machining of high-tech mechanical components. The measuring system is used for non-contact tool setting and monitoring on the company's CNC machining centres.

Experience, intuition and state-of-the-art technologies are the three key factors for the success of a company like Ferrari Technology, which has been supplying some of the world's leading companies in various fields with high-precision technologies for over 40 years. And this Italian company does so with passion, resolve and with the awareness that it has become a benchmark for all those who believe that the continuous optimisation of processes is the only feasible way to succeed.

This Nonantola-based company (Modena province) founded in 1973 began as a small trade company that very quickly made its mark on the market thanks to its know-how in the production of premium components. At the start of the 80s the company decided to switch to digitally-controlled machinery, which would be a sign of things to come for the company's future in fine mechanics.

This decision would have a decisive impact on the company's strategy over the coming years and mark the start of the development and production of prototypes, high-precision mechanical parts for race cars, race bikes, aircraft and spacecraft as well as machinery for producing dental implants. The produced components are made of a variety of materials, including various aluminium alloys, steel, stainless steel, plastic, Teflon and hard-to-cut titanium. Today, around twenty employees tackle the diverse needs of the market, generating revenue of almost 3 million euros each year. They have at their disposal a modern range of machinery

comprising five milling machines, two CNC lathes, two conventional lathes and a wire EDM.

"For around thirty years we have been producing all of our parts with the aid of 3D models using modern CAD/CAM technologies, which are essential for the production of parts that require adherence to strict tolerances," explained Luca Loffa, Head of the Technology and Quality division and also a business associate of business owner Giuseppe Ferrari. "For example, we have an internal measuring room with a large number of measuring devices that allows us to test all parts leaving the production divisions to ensure they conform to specifications in terms of their dimensions."

To guarantee the high level of quality for the produced components, it is very important to monitor the machining parameters and tools using measuring systems directly integrated into the machine. To this end and in order to actively control the production process, Ferrari Technology uses BLUM's Micro Compact NT laser measuring system.

"We discovered Blum-Novotest in a rather unusual way – around ten years ago we bought a machining centre. One of the requirements we placed upon the manufacturer was that it must be possible to perform the tool setting not outside of the machine but in it." And this was how the company discovered the Micro Compact NT laser measuring system

that was already pre-selected and installed by the machine tool manufacturer. However, the manufacturer hadn't demonstrated the system's functions in any way to the employees. "At first we didn't realise its massive potential until one day we were contacted by the Italian branch of the German company. The employees of the branch then opened up a whole new world for us that we were unaware of until then," continued Loffa.

And it was this branch that ultimately provided the employees of Ferrari Technology with a detailed introduction to all of the laser measuring system's functions, from tool breakage detection to measurements of the length, radius and profile of the tool to complex functions such as RunoutControl, ToolTipControl, GrindControl, MicroWearControl and axes compensation. This enabled the company to benefit from all the advantages of employing a non-contact system, including superior productivity and quality in machining, freedom from damage caused by tool breakage, reduced setup times, unmanned operation and a substantial reduction in rejects.

"Because the laser measuring systems have proven to be an extremely precise and useful tool, we use not only the tool setting functionality but also the presence, breakage and wear monitoring functions. We used to measure the tools on an external tool pre-setting device. The operator had to manually enter the data into the control device, and you can imagine how time-consuming and error-prone this was. Thanks to the use of these measuring systems, we can now depend on a stable and robust production process that provides our customers with workpieces of maximum precision and quality."

However, to achieve the kind of precision demanded by this Nonantola-based company, it is essential to minimise all kinds of errors in the production phase and tool setting process. In this light, the partnership

with Blum-Novotest proved to be a stroke of luck for Ferrari Technology. Blum-Novotest has become a reliable and capable partner for the company, willing and ready to support the personnel at Ferrari Technology – not least by means of suitable training opportunities – so that they can make full use of the potential of the measuring systems.

"In the over ten years in which we have used Blum-Novotest measuring systems, we have never had to make use of its technical support – the devices have simply never developed any kind of fault. We are very satisfied in every regard, starting with the employees at the Italian branch with whom we have collaborated very closely over time. This is a relationship that will almost certainly continue with great success in the future. Ultimately, we will be using other measuring systems of the company to manage the very complex production processes that we have to deal with day by day, because our customers should be able to confidently know that when they turn to us, they'll find the right solution for their business."

>>> www.ferraritechnology.com



Luca Loffa, Head of the Technology and Quality division at Ferrari Technology and Diego Benvenuti, Sales Engineer at Blum-Novotest S.r.l. in Italy