

IT WAS AN EVENT RICH IN CONTENT AND INNOVATION

BUFFOLI INDUSTRIES OFFERS HIGHLY CUSTOMIZED SOLUTIONS AND FOCUSES ON TECHNOLOGICAL INNOVATION AND TRAINING TO IMPROVE PRODUCTIVITY AND EFFICIENCY, AND TO PREPARE CUSTOMERS FOR THE FUTURE OF THE MANUFACTURING INDUSTRY.

By Fabrizio Garnero and Serena Raimondi

With a history dating back to 1952 and branches worldwide, Buffoli Industries stands out in both the Italian and international markets for providing “turnkey” solutions, from advanced production prototyping to automation, with special expertise in developing and implementing CNC machines: rotary and linear transfer machines, and multi-spindle lathes. Among the companies within the Group, Buffoli Transfer, based in Brescia, specializes in producing precision parts machines. These machines are designed and built according to customer specifications and guarantee the highest standards of precision and reliability. In particular, Buffoli Transfer machines are known worldwide for their ability to work unmanned while maintaining consistent precision.

The future of the manufacturing industry

Last May, at the BlueTechHub in Brescia and at Buffoli Transfer’s headquarters, an intense two-day open house took place. An event in which clients, partners, and sector operators had the opportunity to experience not only innovative solutions but also the latest developments in production and assembly machines. The event provided a concrete outlook on the future of the manufacturing industry, highlighting technological innovation, machining of lead-free alloys, predictive maintenance, and AI in production.

“It’s an event we organize annually to delve into themes such as lead-free alloys machining, predictive maintenance, and AI in production.”

BlueTechHub

“The technology hub, practically adjacent to Buffoli Transfer’s headquarters, hosts a large area dedicated to our machines,” explained CEO Francesco Buffoli. “At the moment there are four: two bar-fed machines (one in continuous production on brass parts and another being set up), and two suspended-table machines designed for machining cast iron and steel components, both with full automation.”

The advantages of a high level of customization

Buffoli Transfer solutions respond to clients’ specific needs and are optimized to be as flexible and efficient as possible. In particular, the machine’s flexibility is not designed only to meet current needs but to ensure long-lasting productivity that is consistently reliable and high.

“We’re talking about machines designed with particular attention to workholding equipment, cycle subdivision for reduced setup and retooling times,” continues Buffoli. “These are machines that work 24/7 and have a much longer life than common machining centers, sometimes up to 30–40 years, precisely because they have fewer moving parts and no spindle engagement and release—thus practically eliminating obsolescence. Customization of Buffoli solutions is extremely high, especially in technological terms. Our machines are built exclusively in Italy,” Buffoli clarifies, “and customers who buy them want a competitive advantage to stand out from competitors, increase profits, and benefit from lower maintenance costs. The company’s winning strategy is therefore to work alongside customers to define custom processes and solutions that deliver real competitive advantages.”

Efficiency and productivity through robotic automation

As for automation, Buffoli Transfer's robotics department has developed robotic automation tailored to machining while relying on Advanced Robotics Srl, another Group company, for impacts involving artificial intelligence, i.e., the design and installation of robotic automation systems destined for other sectors as well. Advanced Robotics develops solutions not only for machine tools but also for other industries where robotic applications are increasingly relevant. Based on a high level of customization, Buffoli solutions aim not at standardization but at maximizing economies of scale for each client.

"Technological innovation is crucial," emphasizes Buffoli. "It's important that we always present cutting-edge solutions that give consolidated economic returns and competitive advantages."

A "sovereign and private" AI system

On the topic of artificial intelligence, Buffoli Group relies on CloudBits and AI Wonder, together with SCAO Informatica. CloudBits, born within the hub, focuses on augmented and virtual reality solutions, particularly B2B and industrial sectors. Later, it specialized in customized AI solutions. CloudBits and SCAO develop AI systems focused on machine learning, both for predictive purposes and generative AI. The goal is to understand customer needs and design a "sovereign and private" AI system—fully client-controlled—so that data privacy and accessibility are guaranteed.

CloudBits' distinctive product is Cloud-SMED, a system designed to optimize process inefficiency, especially in complex processes.

"Cloud-SMED measures inefficiency but also offers an ideal tool for staff training," explains Buffoli. "Thanks to augmented reality visors, we help operators become more efficient, reducing training times for new personnel. All via web and usable from any device."

The importance of constant and adequate training

Equally crucial is adequate staff training. Buffoli Group strongly supports this, as shown by the biennial ITS course (ITS Academy Machina Lonati for mechatronic technologies), held in Brescia in collaboration with companies aiming to train "modern" operators for advanced machinery.

"As often happens, the school-work balance is slow to adjust," Buffoli notes. "Thanks to our courses and our BlueTechAcademy, young people's knowledge of machine tools and equipment could be even greater than that of many already employed operators."

The need to innovate processes and materials

The open house also tackled a central and often underestimated issue: eliminating lead from brass alloys.

"Large groups are ready to face this important challenge and have already made significant investments," explains Francesco Buffoli. "This requires major process and material innovations, and our research and development is strongly engaged in this direction. Our machines are already designed for machining lead-free alloys, which are more difficult to process but necessary for sustainability and compliance with new standards. This effort will lead to significant progress for the entire industry."