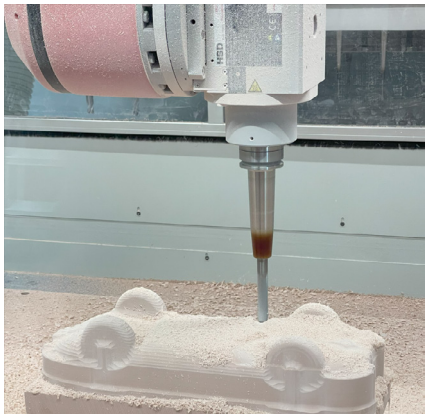
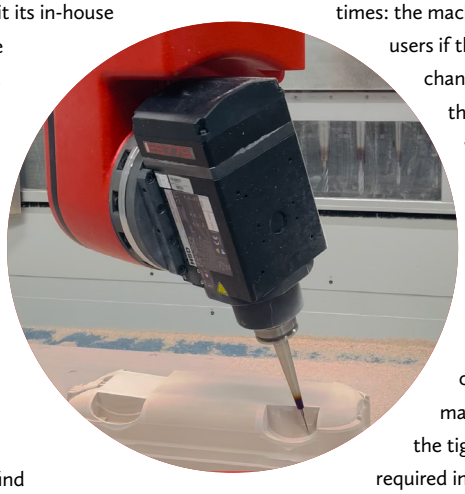
Improving peformances with custom-built CNC technology

Fast turnaround, exceptional quality, and great attention to detail. These key principles guide Kestrel Technologies, a family run business based in Kent with a wealth of experience in the motorsport, automotive, aerospace, marine, film/tv and shop model sectors.

The company is specialised in producing epoxy patterns, rohacell cores, rim tooling, vacuum forming tools, full-size models for film/TV and other props, pattern equipment for casting, metallic mould tools and components, wind tunnel models, and holding and assembly fixtures, bringing designs into reality and ready to use, even if customer needs are based on a one off component only or multiple batch parts.

The collaboration between Belotti and Kestrel stemmed from the UK company's need to have a new machine equipped with additional features to suit its in-house processes. "At Kestrel we have total of seven CNC machines that include 5-axis capabilities with a maximum machining envelope of 2,600 x 1,700 x 1,300 mm in 5-axis and 1,500 x 640 x 500 mm in 3-axis", says Kestrel Technologies Director, Ben Newton.





"When looking for a machine we wanted to find something that can hold tight tolerances but also be capable of machining high density PU and epoxy boards. Belotti helped with this and advised us that the uprated spindle we had chosen would be powerful enough to machine metallics. Our Belotti FLU 2617 with a machining envelope of 2,600 x 1,700 x 1,300 mm arrived in March 2023: this is the first machine we have purchased from Belotti, and we found the ordering process very helpful as we wanted to have some additional features added to our machine, including the Z-axis increased to 1,300 mm."

During the purchasing process, Directors and technicians from Kestrel had the opportunity to go out to Italy to see the machine in operation. "We had a tour around the Belotti factory, and it gave us confidence knowing that we were buying a great quality machine and it showed that their team of engineers were very passionate about what they are doing," continues Ben Newton.

"Once the machine arrived, we had the same engineers that we met in Italy along with the UK Cannon Shelley engineers to help install and commission the machine along with training. We have now been running the machine for some time and we find it extremely user-friendly, and it is a very smooth machine while running giving us a great surface finish which is important in our business as some of our components require hand finishing. The enclosure we had fitted to the machine helps keep the dust concealed while also reducing noise as the panels are insulated, making this machine quiet during operation."

The FLU 2617 machining centre at Kestrel is equipped with a much larger than standard tool change system – specially designed by Belotti - which allows it to store up to 30 tools, improving on machining time. The uprated 22 kW spindle and Heidenhain linear scales for X, Y and Z axis help further improve the accuracy. The configuration includes temperature sensors to monitor if there is any change during cycle times: the machine will even alert users if there is a significant change and will pause the cycle. This, paired with the Renishaw probe and tool laser system, helps speed up the process of setting tools and allows the customer to check the part during machining while keeping the tight tolerances required in their business.

"We have found the accuracy of this machine to be extremely good and meets our customers' needs. The aftercare has been good as well: if we have had a question Belotti has been able to come back to us the same day. With the experience we have had from Belotti and this machine we would recommend them and would use them again in the future," concludes Ben Newton.

Visitors to the Advanced Engineering show can meet experts from Belotti and Cannon Shelley [Stand T155] to learn more about all the latest news.

www.belotti.com
www.cannonshelley.com