

## **Lab Cerba automates cold storage blood testing with new robotic workcell**

**Hatfield, UK – September 2024**

One of Europe's largest private pathology providers has dramatically increased blood testing productivity at its Paris laboratory with a bespoke cold storage robotic automation system designed and built in the UK.

Laboratoire Cerba (Lab Cerba) implemented a pathology automation system with the help of UK-based PAA (Peak Analysis and Automation Ltd), a leading provider of automation technology to the pharmaceutical, biotechnology and laboratory sectors, with a track record of supplying solutions to the likes of Moderna, BioNTech and Janssen Pharmaceuticals.

The challenge for PAA was to devise a solution that could take sample tubes from the existing Total Laboratory Automation (TLA) system and then sort them into a format accepted by the storage unit, whilst optimising both the capacity and throughput of the storage platform. The solution would also have to contend with different tube sizes, a lack of sample tracking data and varying throughput demands throughout the day.

The PAA solution involved the use of robots for the rapid sorting and cold storage of different blood samples at a range of different temperatures with a throughput of up to 2,000 samples per hour.

The PAA workcell developed for Lab CERBA comprises four Mitsubishi Electric FR-Series SCARA robots with a 20Kg payload and a maximum reach of 1,000mm installed alongside the TLA system.

The Mitsubishi Electric robots benefit from high-rigidity arms and cutting-edge servo controls to reach speeds of 13,283mm/s, and are powered by Mitsubishi Electric's MELSEC iQ-R controller. This not only controls the robots but also the rest of the handling system, which is automated with MR-J4 Series servos and E800 variable speed drives.

Jon Newman-Smith, Research & Development Director at PAA, says that laboratories are confronted with unrelenting pressure to produce faster turnaround times and reduce errors to improve patient care.

“Without the use of automation, the only other solution would be manual sorting which is much slower and prone to human error,” he says.

“The central challenge was to create a workcell in which the sample tubes could be taken from the TLA system and then sorted into a format accepted by the storage unit, whilst optimising both the capacity and throughput of the storage platform.

“This solution provided a tailored cold storage facility which could significantly increase capacity, seamlessly integrating with the existing TLA system.”

Barry Weller, Product Manager – Mechatronics at Mitsubishi Electric Automation Systems UK, comments “Finding ways to automate complex processing systems can lead to significant productivity gains for the pathology industry, which in turn can make a material difference to patient care. PAA have long championed the use of industrial automation systems in healthcare applications and we were once again delighted to collaborate with the team on this highly complex yet incredibly rewarding project.”

For more information on Mitsubishi Electric’s range of FR series of SCARA robots, please visit: <https://gb.mitsubishielectric.com/fa/products/rbt/robot/horizontal>.

**ENDS**

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*\*U.S. dollar amounts are translated from yen at the rate of ¥134=U.S.\$1, the approximate rate on the Tokyo Foreign Exchange Market on March 31, 2023.*

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