

Precision engineering firm invests £250,000 to enhance quality control



The LK Altera C 10.7.5 CMM inspecting a Spitfire axle at Rodwell Powell's Basildon facility



Our investment in LK Metrology's cutting-edge CMM technology reinforces our capabilities in aerospace and defence engineering and ensures that we uphold the highest industry standards.

Andrew Rodwell, Managing Director, Rodwell Powell

Basildon-based Rodwell Powell, a leading specialist in precision machining for the aerospace, defence, marine, construction and other industries, has invested £250,000 in a comprehensive renovation of its inspection department. The centrepiece of the upgrade was the acquisition of two coordinate measuring machines (CMMs) manufactured by LK Metrology at its Castle Donington, Derbyshire factory. They are delivering high levels of accuracy and efficiency to support increasingly complex quality control (QC) requirements for Rodwell Powell's prestigious clients, which include Rolls-Royce Aerospace and Caterpillar.

Founded in 1951 by John Rodwell, the eponymous company has a legacy of precision engineering dating back to World War II, when Mr Rodwell's exceptional engineering talent was recognised after he was conscripted into the British Army. He was recalled to lead a team of hundreds of skilled workers who were contributing to the war effort, an endeavour that included the manufacture of critical tooling and components for the Spitfire combat aircraft. His leadership and expertise during this crucial period laid the foundation for

the future company's enduring focus on precision and quality.

Now, more than 80 years after the Second World War, Rodwell Powell has come full-circle by once again manufacturing Spitfire axles, but this time for specialist restoration projects to ensure the legendary aircraft continues to fly. Requiring a blend of traditional craftsmanship and modern techniques, such projects combine the company's rich heritage with cutting-edge manufacturing, which has led to it also supplying high-precision components for Rolls-Royce jet engines, Caterpillar heavy machinery and other prestigious OEM equipment.

It was the growing complexity and size of components that prompted Rodwell Powell to review its inspection department's facilities. The ensuing transformation saw the installation of two next-generation LK Metrology Altera C CMMs, enabling the subcontractor to handle larger, more intricate parts with greater accuracy and efficiency. The scope of the investment in QC encompassed the creation of an ultra-

modern environment featuring a newly designed, naturally lit inspection room to enhance inspector focus and comfort. Improved LED lighting and ceiling enhancements ensure optimal visibility for precise measurements. Ergonomic workstations and inspection desks further optimise efficiency.

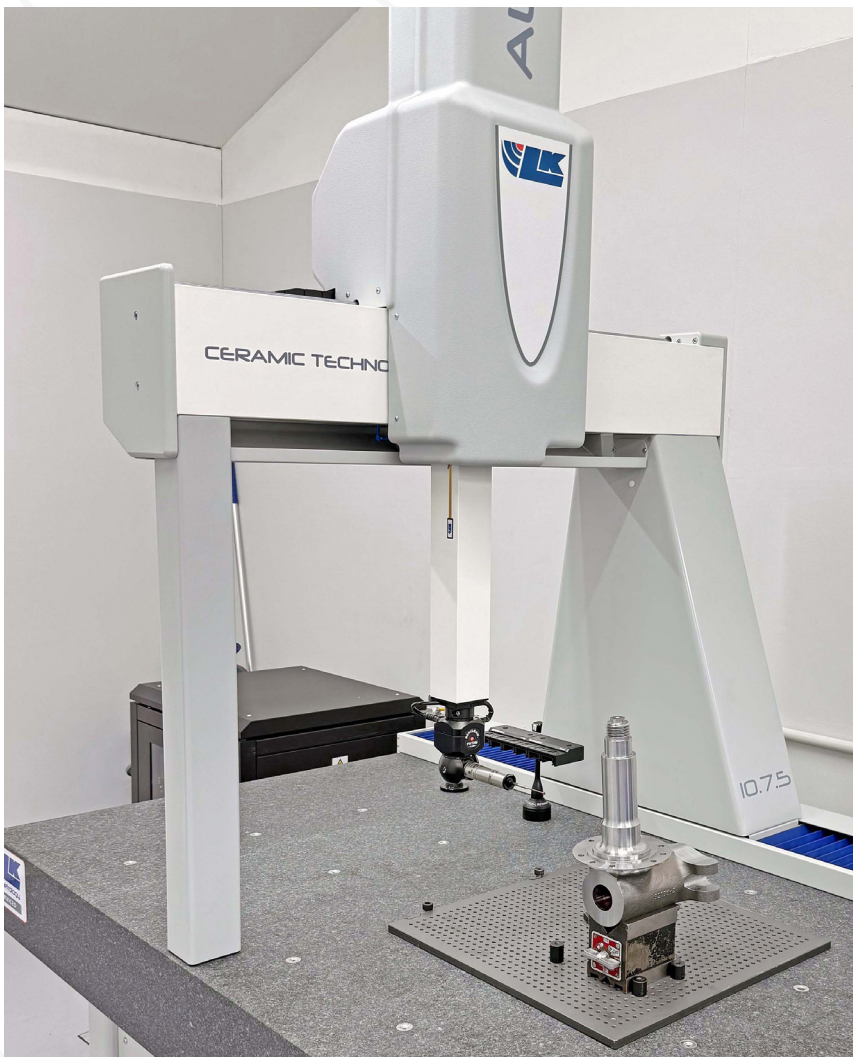
By providing inspectors with the best possible tools and working conditions, Rodwell Powell is ensuring the highest QC standards. This has been reinforced by the recruitment of an experienced senior quality inspector, who was immediately enrolled onto LK Metrology's advanced CMM

training programme. To maximise the potential of the new technology, the rest of the inspection team has also undergone comprehensive training, having completed an intensive, week-long course in Castle Donington.

One of the new CMMs is an LK Altera C 10.7.5 equipped with a Renishaw PH10M Plus motorised indexing head deploying an SP25M probe with an SH25-2 stylus holder, which can perform scanning for form measurement and reverse engineering as well as touch-trigger probing for accurate geometrical measurements. Featured also is a

6-port stylus change rack to enable unattended completion of complex inspection routines. The second CMM is a smaller LK Altera C 7.7.5 with PH10M Plus and SH25-2, and additionally equipped with a Renishaw TM25-20 touch-trigger probe module, allowing the continued use of legacy CMM Manager software alongside LK's latest CAMIO 2024 R2.

The latter is CAD-based metrology software underpinning the use of multiple sensors, intuitive programming, simulation and execution, results analysis, advanced GD&T, powerful reporting, and automation. Both CMMs are driven by LK's NMC300 controller, which supports an array of probing systems and



The LK Altera C 10.7.5 CMM in the upgraded metrology room in Basildon



sensors and is automation-ready for integration into modern manufacturing environments.

Andrew Rodwell, Managing Director of Rodwell Powell commented, “Our investment in LK Metrology’s cutting-edge CMM technology is a game-changer for us. Not only does it reinforce our capabilities in aerospace and defence engineering, but it also ensures that we continue to meet and exceed the highest industry standards. The CMMs allow for increased accuracy, greater throughput and reduced lead times, reinforcing our reputation for uncompromising quality in these highly demanding industries.”

Brandon Sanders, CMM Quality Inspector at Rodwell Powell added, “With larger and more complex components being manufactured these days, our enhanced inspection capabilities will be critical in maintaining absolute precision for Rolls-Royce, Caterpillar and our Spitfire restoration partners.”



Two further images of the Spitfire axle being inspected

LK was selected to provide the new CMMs after careful assessment by the quality team at Rodwell Powell, which cited several key factors in the decision. They include the supplier’s UK-based manufacturing and technical support, advanced scanning technology and seamless software integration, plus the ability to provide bespoke operator training to ensure maximum efficiency.

Committed to developing the skills of future generations of engineers, Rodwell Powell has donated its previous LK Integra 6.5.4 CMM to a local training facility in order to provide aspiring engineers with hands-on experience using world-class metrology equipment. This initiative reflects a dedication to supporting education and ensuring that future engineers have access to modern measurement and inspection technology.



About LK Metrology

LK Metrology is renowned for innovative metrology solutions and services. The company's products, including coordinate measuring machines (CMM), portable measuring arms and metrology software, are used worldwide to control and improve the quality of manufactured components. Its precision technology underpins the process chain from design, development, production and assembly through to quality assurance in global industries such as automotive, aerospace, defence, motorsport, energy, medical and contract inspection.

Established in England in 1963, LK Metrology has an impressive heritage in metrology dating back to the birth of CMM technology. Founded by CMM pioneer Norman Key and his father-in-law Jim Lowther, LK Metrology is credited with many of the CMM industry's firsts including the first bridge-type design, first OEM to integrate computers, first to use a touch trigger probe, first to develop inspection software, first to use all air bearings and granite guideways, first to use carbon fibre composite spindles, first to use microprocessor-controlled drive systems, first to produce a truly thermally stable CMM and first to produce a high-accuracy horizontal-spindle CMM.

In 2018, LK Metrology was relaunched as an independent CMM manufacturer after several years as a division of Nikon Metrology. Headquartered in the UK, LK's CMM development and production are at the company's facility in Castle Donington. Sales and support offices are located in the UK, North America, Belgium, France, Germany, Italy and China, supplemented by a worldwide distributor network.

Copyright © 2025. LK Metrology. All right reserved.