

PRECISION IN MOTION



Klingelberg - High-Precision Gear Manufacturing

When it comes to high-precision gear manufacturing and measurement, few names carry the same heritage, innovation, and engineering integrity as Klingelberg. Known worldwide for their pioneering work in bevel gear technology, precision measuring centres, and complete process automation, Klingelberg continues to set the standard for precision gear solutions across automotive, aerospace, power transmission and industrial drives.

Here in the UK, Micronz Ltd is proud to have been representing Hofler/Klingelberg since 2009 - bringing world-leading gear production and inspection technology to British manufacturers who demand the highest levels of quality, repeatability, and digital readiness.



THE KLINGELNBERG DIFFERENCE



Founded in 1863 in Germany, Klingelberg has evolved from a gear and bevel machine pioneer into a fully integrated systems provider - offering solutions that cover the entire gear manufacturing chain: from rough machining to finishing and inspection.

The Klingelberg product portfolio covers four main pillars:

1. Bevel Gear Manufacturing Machines - C-Series & G-Series

The C-series bevel gear cutting and grinding machines, (such as the C 30, C 50, C 100U, G 30, G 35, G 60, and G 80) deliver unmatched accuracy through the Klingelberg Cyclo-Paloid® process - a unique continuous indexing method that ensures silent running and optimal load distribution.

For advanced finishing, G-series bevel gear grinding machines combine rigid mechanics with integrated measuring cycles, enabling fully closed-loop production.

2. Cylindrical Gear Grinding Machines - Viper & Rapid Series

The Viper and Rapid series embody flexibility and productivity for spur and helical gears. Using direct-drive technology, adaptive dressing and in-process measuring, the machines meet the toughest tolerance demands across a wide range of applications. The SpeedViper completes the product portfolio and is focused on highly productive generating grinding for high-volume production.

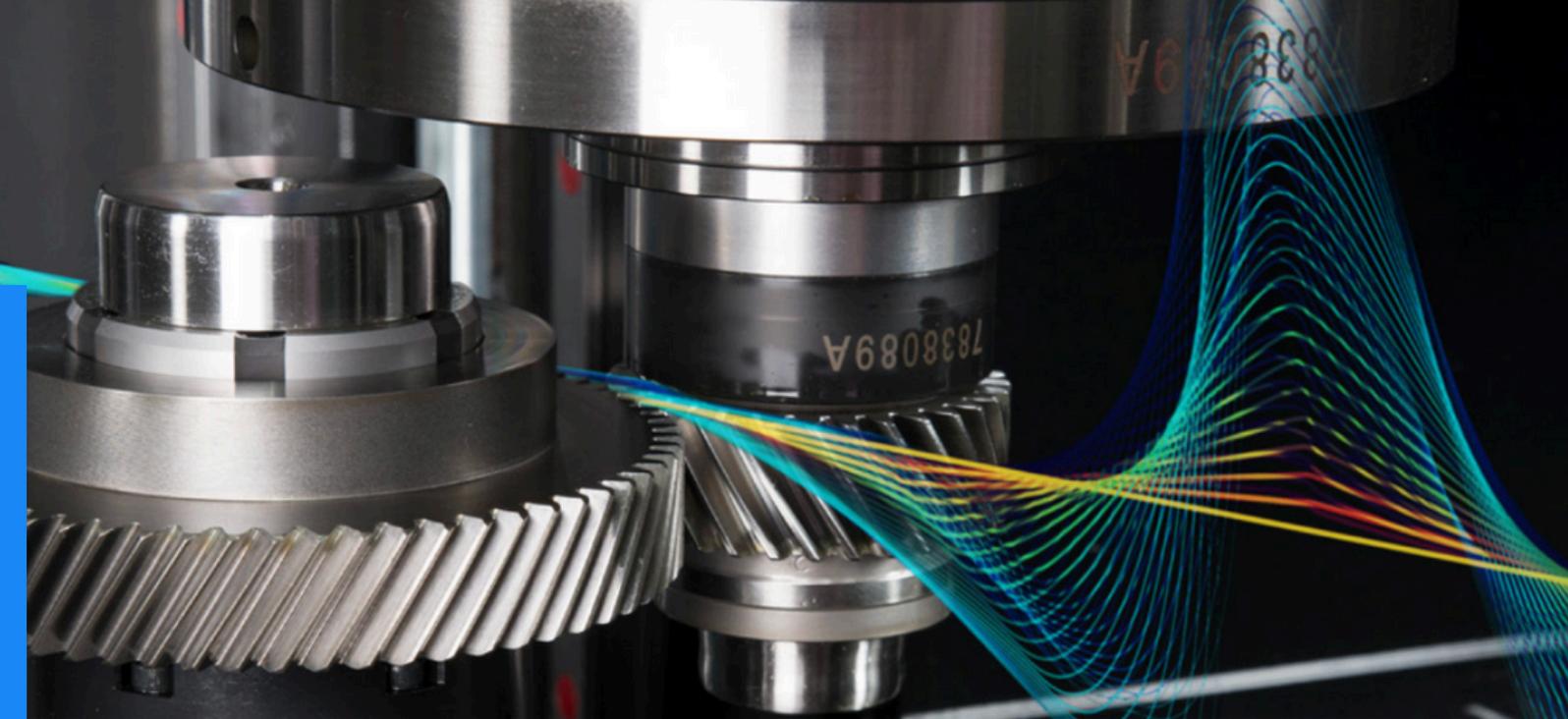
3. Precision Measuring Centres - P-Series

Klingelberg's P-series measuring centres are widely recognised as industry benchmarks for accuracy and speed. The machines measure gears, shafts, and tools with sub-micron precision, supporting full 3D evaluation and conforming to VDI/VDE 2612/2613 Group 1 standards.

In many plants, a P-series system serves as both a metrology reference and a process-control hub — closing the loop between production and quality assurance.

4. Digital Integration - Closed Loop Manufacturing

A defining advantage of Klingelberg's ecosystem is its closed-loop connectivity between grinding, cutting, and measuring machines. With the company's "Gear Engine" software and real-time data exchange, correction values from measurement can be automatically fed back to the production machines, reducing human error and scrap while increasing repeatability.



Why Klingelberg Fits the UK Manufacturing Landscape

The UK's precision engineering sector, particularly in EV transmissions, aerospace gearing, and renewable energy gearboxes - increasingly requires ultra-accurate, digitally connected manufacturing systems.

Klingelberg's combination of German mechanical stability, software sophistication, and process automation provides the ideal foundation for these challenges.

For UK manufacturers, Klingelberg's **advantages** include:

- Reduced gear noise & improved efficiency - *crucial for EV and aerospace applications*
- Integrated measurement and correction - *fewer setups, faster throughput*
- Digital twin capability - *simulation and real-time control of production*
- Compact footprint machines - *designed for modern high-mix production lines*

In Summary

Klingelberg's machines embody the future of gear manufacturing - blending traditional German precision with digital intelligence. For UK firms seeking higher efficiency, lower noise, and absolute accuracy, these systems represent a step change in performance and process control.

As industries evolve toward smarter, connected manufacturing, Klingelberg and Micronz are helping UK companies turn data, precision, and craftsmanship into competitive advantage.

Micronz Ltd Your UK Partner in Gear Precision

As the official UK representative for Klingelberg, Micronz arranges or provides:

- Sales consultation and project planning for gear cutting, grinding, and metrology solutions
- Installation, training, service and spare parts.
- Application support for process optimisation, software integration, and closed-loop setups

Whether you're upgrading a single grinding process or building a complete gear-manufacturing cell, Micronz ensures your investment in Klingelberg technology delivers measurable productivity and precision gains.

