WENZEL®

METROLOGY WORLD

2026

Precision | Productivity | Passion

EDITORIAL

Dear Readers,

When I look back on the past few months, one thing stands out above all else: tremendous momentum. Markets are changing, technologies are advancing rapidly, and demands for quality, efficiency, and sustainability are constantly rising. It is precisely in times like these that we need guidance, reliability, and the courage to break new ground.

As a second-generation family-owned business, we have been helping our customers make precision measurable for many decades. But today, precision means far more than simply adhering to tolerances. It is the foundation for innovation, for reliable processes, and for sustainable economic success.

This issue of Metrology World showcases just how diverse modern metrology has become. With our new HA series, we are introducing a platform that sets new standards in high-precision coordinate measuring technology. At the same time, the WENZEL XP demonstrates how high-performance measurement technology can make a decisive contribution to process reliability directly on the production floor. Our WM | Quartis software is also undergoing continuous development and helps users make measurement processes even more efficient, intelligent, and straightforward.

However, what matters most to me are our customers' stories. The user stories in this magazine vividly illustrate just how varied the challenges are in practice—and how crucial precise measurement technology has become to the success of modern manufacturing companies. Whether in small and medium-sized businesses, international industry, or research: behind every application are people who are passionately committed to creating better products and processes. It is precisely these people who are at the center of my focus.

Personally, I am also delighted to have been awarded the Bavarian State Medal. I do not view this honor as a personal accolade, but rather as recognition of the achievements of the many people who take on responsibility every day—in our companies, in our region, and in our society.

I hope you enjoy reading this issue, gain some exciting insights, and perhaps even find a new idea or two for your daily work.

Sincerely yours,

Dr. Heike Wenzel
CEO & Managing Partner
WENZEL Group GmbH & Co. KG

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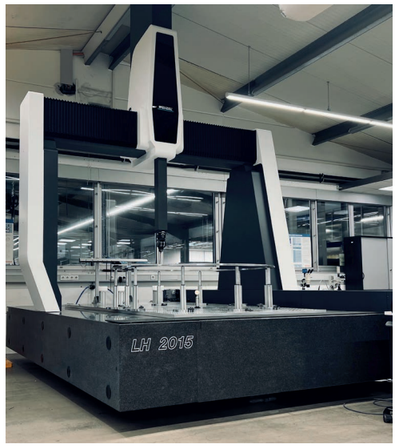
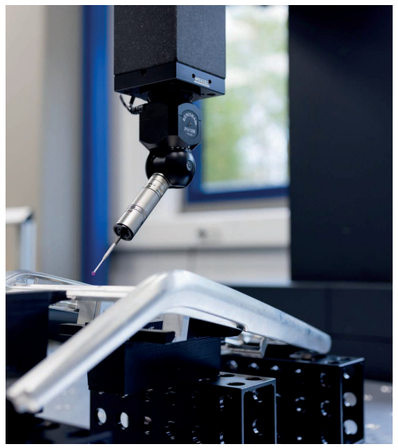




WENZEL HA Series

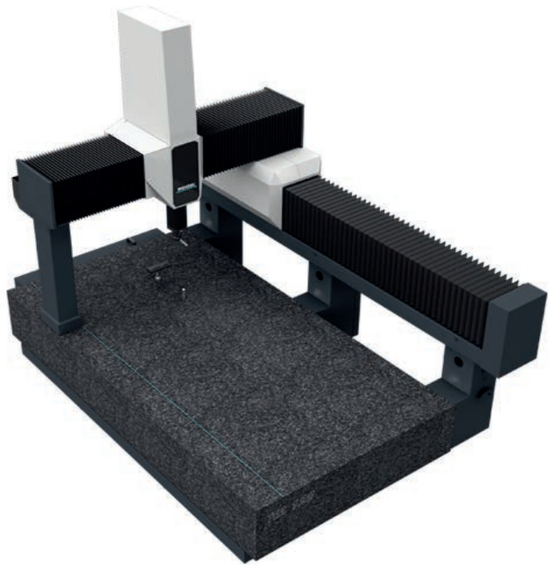
When Precision Becomes the Standard

In many industrial sectors, “highly accurate” is no longer sufficient. Where measurement results serve as a reference, development processes must be validated, or high-precision components need to be evaluated, maximum accuracy and absolute reproducibility are essential. WENZEL has developed the new HA Series specifically to meet these requirements.

The High-Accuracy series combines decades of experience in building high-precision coordinate measuring machines with state-of-the-art measurement technology and a machine architecture consistently designed for precision. The result is the most accurate 3D coordinate measuring machine in its class—developed for the most demanding measurement tasks and designed for long-term measurement reliability. The HA Series enables the combination of tactile and optical sensors in a single high-precision measuring system, thereby providing maximum flexibility for a wide variety of inspection tasks. The technical foundation of the series is based on the proven semi-gantry architecture of the LH Series, which has been specifically further developed to meet the requirements of high-accuracy metrology.

Precision starts with the material

A key factor in achieving the highest measurement accuracy lies in the machine’s structure itself. That is why WENZEL consistently relies on natural hard stone as a central structural element. The solid granite body forms the foundation of the HA Series and ensures exceptional thermal stability, high inherent rigidity, and outstanding vibration damping.



Typ	Messbereich X x Y x Z (mm)	Grenzwert Längenmessabweichung $E_{L\ MPE}$ (µm) Premium Select
HA 108	1000 x 1500/2000/2500/3000 x 800	ab 0,8 + L/ 500
HA 1010	1000 x 1500/2000/2500/3000 x 1000	ab 0,9 + L/ 500
HA 1012	1000 x 1500/2000/2500/3000 x 1200	ab 1,1 + L/ 500
HA 128	1200 x 2000/2500/3000/4000/5000/6000 x 1200	ab 0,9 + L/ 500
HA 1210	1200 x 2000/2500/3000/4000/5000/6000 x 1000	ab 1,1 + L/ 500
HA 1212	1200 x 2000/2500/3000/4000/5000/6000 x 1200	ab 1,3 + L/ 500
HA 1215	1200 x 2000/2500/3000/4000/5000/6000 x 1500	ab 1,7 + L/ 500
HA 1217	1200 x 2000/2500/3000/4000/5000/6000 x 1750	ab 2,1 + L/ 500
HA 158	1500 x 2000/2500/3000/4000/5000/6000 x 800	ab 1,2 + L/ 500
HA 1510	1500 x 2000/2500/3000/4000/5000/6000 x 1000	ab 1,4 + L/ 500
HA 1512	1500 x 2000/2500/3000/4000/5000/6000 x 1200	ab 1,6 + L/ 500
HA 1515	1500 x 2000/2500/3000/4000/5000/6000 x 1500	ab 2,2 + L/ 500
HA 1517	1500 x 2000/2500/3000/4000/5000/6000 x 1750	ab 2,5 + L/ 500

The guideways, the crossbeam, and other load-bearing components are also made of precision-machined natural hard stone. As a result, all axes respond uniformly to temperature fluctuations and ensure extremely stable measurement performance—even with large measurement volumes or long measurement cycles. Every detail of the design has been engineered to minimize interference and lay the foundation for reliable measurement results.

A platform for the measurement technology of tomorrow

The HA Series was designed not only for the highest accuracy, but also for maximum flexibility. State-of-the-art tactile, optical, and 5-axis measurement systems can be integrated onto a single platform, enabling the optimal sensor strategy for every measurement task.

Optimized guides, preloaded air bearings, FEM-optimized structural components, and intelligent compensation functions ensure that even the smallest deviations are reliably detected. This makes the HA Series particularly well-suited for reference measurement rooms, research and development, calibration tasks, and quality-critical applications in industries where precision represents a decisive competitive advantage.

With accuracies of up to 0.8 + L/500 µm, the HA Series represents a new generation of high-precision coordinate measuring technology—developed for anyone who cannot rely on estimates but must depend on reliable reference values.

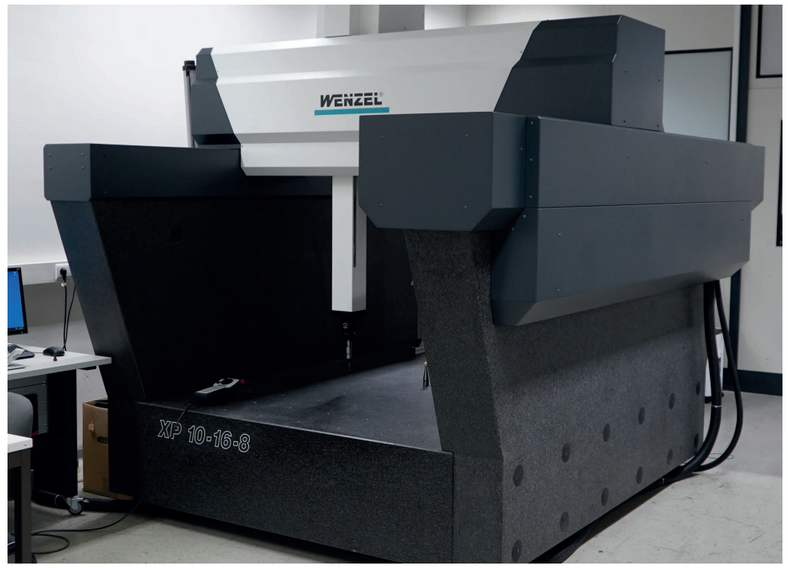
WENZEL XP

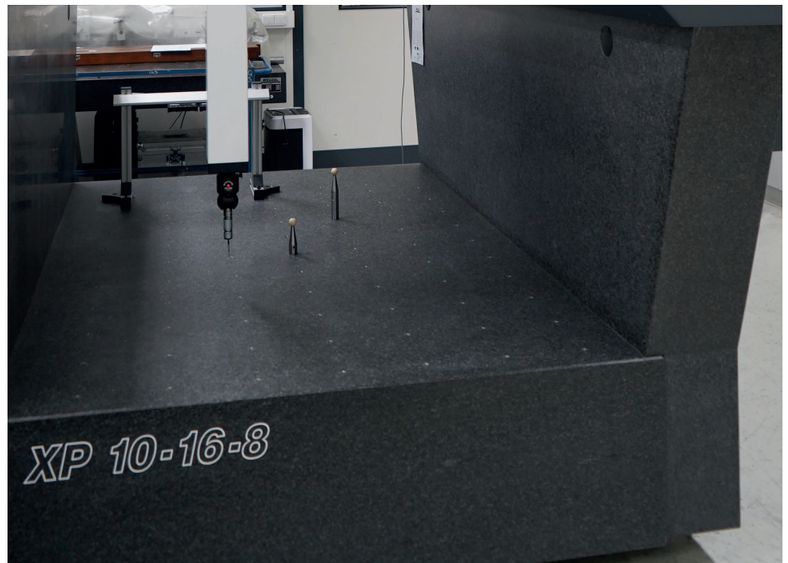
Precision That Makes a Difference in Manufacturing

The WENZEL XP represents measurement technology that doesn't wait—it works right where quality is created. Designed for demanding production environments, it combines speed, stability, and measurement accuracy into a high-performance manufacturing CMM. The focus: uncompromising precision under real shop-floor conditions. Even in the face of temperature fluctuations, vibrations, or dust, the XP delivers reliable results and supports stable manufacturing processes in step with production.

Its robust bridge design and high-quality materials, such as hand-lapped granite, form the foundation for exceptional accuracy. Generous bearing spacings and the decoupled Z-axis ensure smooth movements even at high traverse speeds. The highlight: maximum mechanical stability for reproducible measurement results—even with dynamic measurement strategies.

Flexibility is a key strength of the XP: The modular machine concept allows for the integration of a wide variety of sensors—from tactile probing systems to optical solutions and high-performance 5-axis technology. This enables the machine to grow with your requirements, becoming a versatile measuring center for complex components. The focus: maximum adaptability through multisensor expandability.





The WENZEL XP excels wherever speed and precision must go hand in hand. Whether for mass production measurement, quality assurance, analysis, reverse engineering, or model making—it helps companies efficiently integrate measurement processes into manufacturing and identify deviations early on. The highlight: enabling precise decisions directly within the production process.

With its combination of stability, dynamics, and modular expandability, the WENZEL XP takes measurement technology to a new level—powerful, reliable, and ready for the challenges of modern manufacturing. The focus: precision as an active component of value creation.

FEATURES

- **Ergonomic Design**
  Easy to Use | Low-Maintenance | Attractive Design
- **High mechanical precision**
  Granite Base | Hand-lapped base plate (DIN 876/0) | Air-bearing guide elements in all axes | Temperature-stable structure
- **Low operating costs**
  Low Air Consumption | RENISHAW Sensors | Reliable and Affordable Replacement Parts
- **High flexibility**
  Bellows covers for protection against contamination | Data compatibility with other WENZEL systems | Automation solutions
- **A Wide Range of Sensor Options**
  Switching Sensor Systems | 3- or 5-Axis Scanning | Optical Sensors

WM | Quartis R2026-1

Measure smarter, analyze better

With the latest version, WM | Quartis R2026-1, WENZEL is introducing a comprehensive software update that provides significant support to users of coordinate measuring technology in their day-to-day work. Numerous new features and optimizations improve efficiency in data analysis and programming, enhance the quality of point cloud and extract element processing, and provide greater reliability and flexibility—especially for measurements using a rotary table.

More efficient analysis and more flexible programming

WM | The Quartis R2026-1 offers new possibilities for standard-compliant yet intuitive evaluation. Perpendicularity can now be evaluated using an ISO-GPS-compliant orientation indicator with two reference points. For graphical curve evaluation, axial and 3D curves can now be unfolded and visualized as a flattened representation with a tolerance zone.

When programming, users benefit from variable program loops with freely definable start, end, and step values.

The new automatic probe focusing feature also ensures that the probe system remains centered in the graphics window at all times—even while the measuring device is moving. In addition, a new copy function for workpieces simplifies data management by automatically copying only the most recent measurement for each workpiece.

Improved Quality and Performance for Point Clouds and Extracted Elements

Another key feature of this release is optical metrology. Curve elements can now be extracted directly from point clouds, including planar, axial, and 3D curve types. Extracted elements can be calculated even while editing the program block, allowing for a direct preview.

Improved algorithms ensure more stable cylinder extractions, correctly calculated normal directions even at high scan speeds, and significantly higher performance when working with large point cloud sets. At the same time, material thicknesses from the measurement plan are automatically taken into account, and new measurement principles such as BK (trim) are supported.

Greater Safety and Flexibility in Rotary Table Measurements

WM | The Quartis R2026-1 significantly expands the range of applications for the rotary table. Point clouds can be captured more quickly, and even highly eccentric, rotationally symmetric elements can be measured reliably. Collision detection has been comprehensively enhanced and now also takes into account fixed probe heads, rotary table movements, and individually configurable accessories. Optimized alignment with the rotary table axis further increases measurement accuracy.

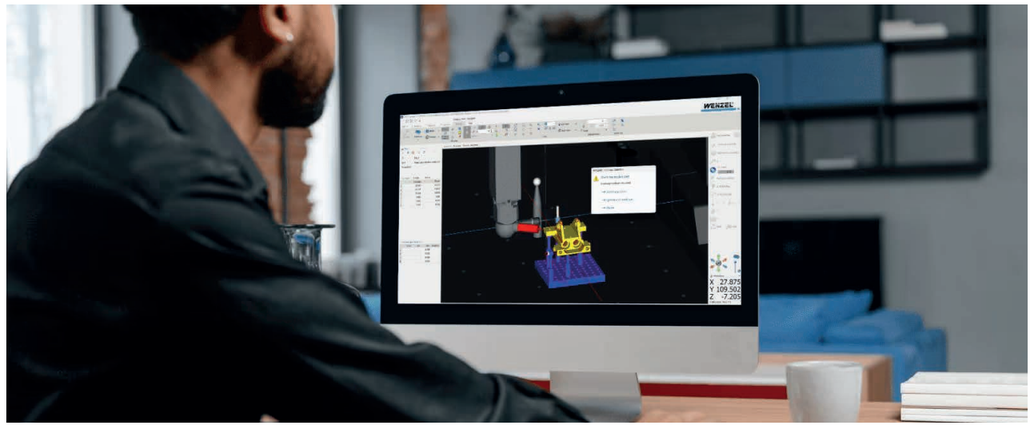
Advanced CAD Models and Interfaces

To ensure a realistic representation, there are over 250 CAD models of measuring instruments as well as numerous new accessory models

are available, including new WENZEL series and rotary table variants. At the same time, numerous CAD interfaces have been updated and expanded.

More Highlights for Maximum Productivity

Additional features such as audible signals for touch points in I++-DME server mode, individually adjustable PHS rotation and panning speeds, the creation of CAD models through the extrusion of 2D profiles, and the automatic switch to the high-performance graphics card round out this release. Integration with WM | Gear has also been further optimized, ensuring smoother and faster measurement processes.



WM | Quartis Tipps & Tricks

Greater Efficiency, Precision, and Productivity in Everyday Measurement Technology

The demands placed on modern measurement technology are constantly increasing. This makes it all the more important to make the most of the capabilities of measurement software and to design efficient workflows. With our WM | Quartis Tips & Tricks series, users regularly receive practical recommendations, helpful features, and proven best practices drawn directly from the day-to-day work of our application and software experts.

These brief tips show how to simplify recurring tasks, optimize measurement programs, and generate reports more quickly. The goal is to provide you with concrete added value for your daily work with WM | Quartis—easy to understand, immediately applicable, and delivering instant benefits.

A New Practical Tip Every Month

Once a month, we publish a new WM | Quartis Tip & Trick. In short videos, we showcase features, time-saving tools, and useful tricks that are often overlooked but offer great potential for increased efficiency.

Topics published to date include, among others:

- Working with keyboard shortcuts
- Efficient use of filters and selection options
- Optimizing evaluation reports
- Simplified navigation within complex measurement programs
- Faster creation and editing of measurement elements
- Practical functions for CAD- and PMI-based measurement tasks
- Time-saving settings for recurring processes.

Scan the QR code and discover all the WM | Quartis tips and tricks we've published so far on our YouTube channel.

Highlights at a Glance:

- Geometry, Free-Form, and Curves
- Supports manual and CNC measuring devices
- Scanning with tactile and optical sensors as well as 5-axis measuring heads
- Structured and secure data management
- Report generator
- User-friendly operation
- Ready for specialized applications
- Remote control interface
- Acquisition and analysis of point clouds

In addition, we regularly share new tips, software updates, and interesting use cases on our social media channels. Follow us on LinkedIn and Facebook so you don't miss any new posts.

Automated Correction in Manufacturing

World Cup | ToolCorrect Post-Processor Bridges the Digital Gap Between Measurement Technology and Machine Tools

With the WM | ToolCorrect (TC) postprocessor, WENZEL offers an intelligent software solution for automated manufacturing control. The module links measurement results from quality inspection directly to the machine tool, enabling a seamless, digital process chain—from measurement to correction during manufacturing.

The WM | postprocessor acts as a central control unit between the measuring machine and the machining center. Measurement results from the WM | Quartis measurement software are analyzed, deviations are automatically calculated, and correction values are transmitted to the machine tool in real time. Manual intervention and time-consuming correction loops are completely eliminated.

Automatic tool correction around the clock

The integrated 24/7 tool compensation ensures consistently high precision—even during unattended operation. Deviations are continuously compensated for, significantly improving dimensional accuracy and process stability.

Smart Wear Detection

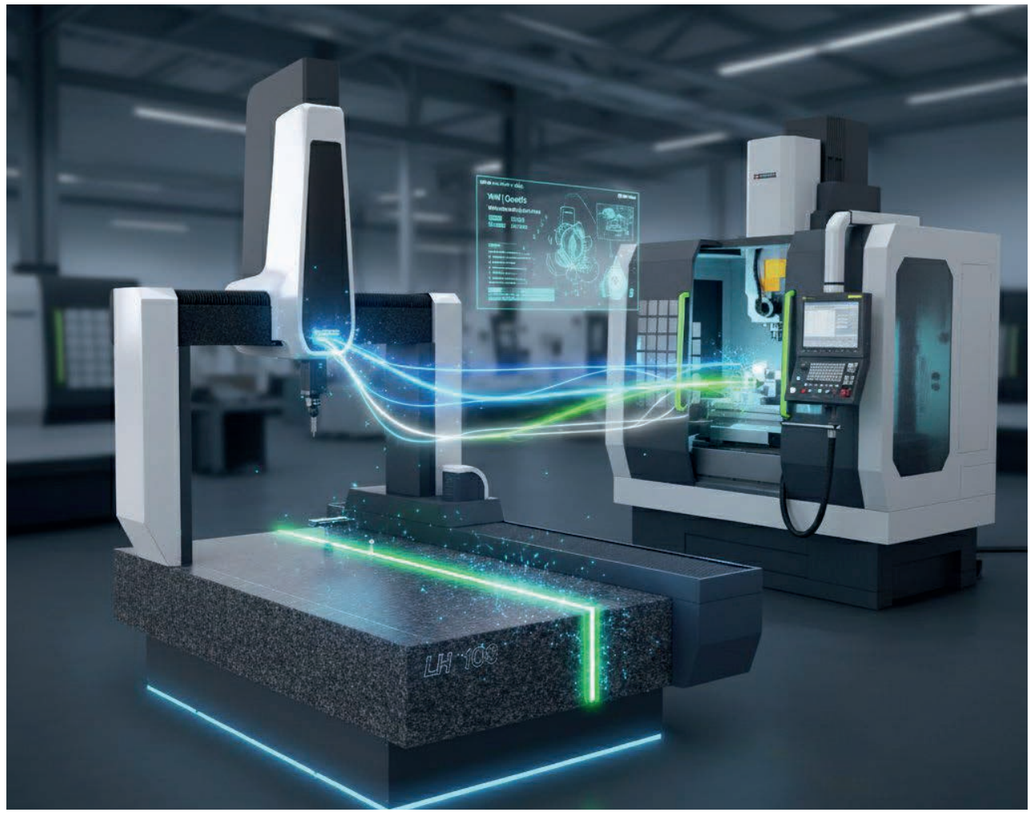
In addition to simply correcting dimensions, the WM | ToolCorrect post-processor monitors the correction values over the long term and detects tool wear at an early stage. When predefined thresholds are reached, a tool change can be triggered automatically. This reduces scrap, prevents unplanned downtime, and increases machine availability.

Flexible integration into existing manufacturing environments

The machine tool is connected via the industrial PROFINET protocol by default. Alternatively, correction data can also be provided via an ASCII file—ideal for older or specialized machine designs. This allows the WM | ToolCorrect postprocessor to be flexibly integrated into virtually any production environment.

Greater precision, less waste, higher productivity

By seamlessly integrating measurement technology and manufacturing, the WM | ToolCorrect post-processor enables quality control that is closely aligned with the manufacturing process. Companies benefit from more stable processes, reduced production costs, and sustainably higher efficiency in high-precision manufacturing.



Quality made in Germany

Highest precision in machining

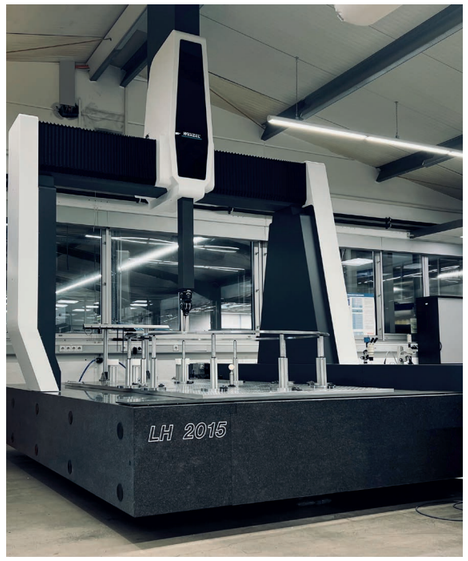
BARTH Präzisionstechnik GmbH is a reliable partner for high-precision parts produced using machining processes. With a wide range of dimensions—from 5 to 2,500 mm—and weights—from 5 grams to over 2 metric tons—the company supplies customers worldwide in the fields of energy technology, BIM/construction digitization, plant engineering, and mechanical engineering. The company's philosophy is based on the highest precision, a zero-defect mindset, and absolute adherence to delivery schedules.

In keeping with this tradition of continuous quality optimization, the Binzwang-based company chose the LH 2015 coordinate measuring machine from WENZEL. The high-performance LH 2015 gantry-type measuring machine, equipped with WM | Quartis software and the REVO 5-axis multisensor probing system from Renishaw, offers a wide range of measurement capabilities.

The perfect combination of measuring machines, sensors, software, and service

The LH series CMMs are characterized by extremely precise measurement results and high measurement speeds. LH gantry-type coordinate measuring machines are among the most widely used CMMs on the market. Their robust construction, made of natural hard granite, ensures durability and the highest quality.

The REVO 5-axis multisensor probing system offers a unique combination of touch-trigger and scanning measurement, enabling fast and precise measurement of even complex components. Thanks to its high flexibility and accuracy, the combination of the REVO with the LH 2015 offers significant advantages and a wide range of applications.



The WM | Quartis software forms the core of the measurement solution and enables precise acquisition, analysis, and visualization of measurement data. Thanks to its intuitive user interface and versatile functions, this proven measurement software is an indispensable tool for quality control.

The professional team at WENZEL supported BARTH in integrating the LH 2015, resulting in a smooth commissioning process. The machine enables BARTH to further optimize its production processes and deliver first-class products to its customers.

The company owners—with three generations of the Barth family currently actively involved in the business—agree:

"Manufactured by a German family-owned company in Germany, for use in a German family-owned company, to perform high-precision measurement tasks. This measuring machine is not only sustainable for our company, but also sets the standard for future generations."

About BARTH Präzisionstechnik GmbH

For BARTH Präzisionstechnik GmbH, precision is not just a goal, but the foundation of its success. The company's values reflect its commitment to the highest standards and form the basis for successful collaboration with employees, customers, and business partners. As a family-owned company, BARTH relies on innovation, a focus on quality, and flexibility to meet the ever-changing needs of its customers. Its clear commitment to maximum precision and on-time delivery underscores its reputation as a leading service provider in European industry.

Precision from a Single Source

From Manual Inspection to the Measurement Lab: How the Shift to Contract Manufacturing Calls for New Measurement Strategies

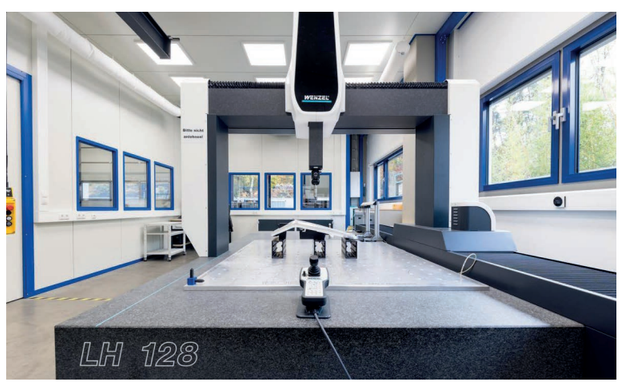
From traditional foundry model making to complex contract manufacturing for high-end applications: Modellbau Dörr has undergone a profound transformation in recent years. But with demanding customers in the plastics and aerospace industries, the requirements for quality assurance have also increased. The transition from hand-held measuring instruments to a CNC-controlled coordinate measuring machine in a specially designed measurement room was inevitable.

How does a German SME navigate changing times? It responds with agility, flexibility, and technical expertise. From this perspective, the story of Modellbau Dörr in St. Augustin (North Rhine-Westphalia) is exemplary for many SMEs: Having started in 1946 in foundry model making, the company diversified early on. “We didn’t want to be dependent on any suppliers,” says plant manager Markus Borghoff, describing the philosophy. This drive for independence led to an enormous vertical range of manufacture: From model making to fixture and gauge construction to modern contract manufacturing, the company now covers almost all areas.

Currently, however, the focus is shifting significantly once again. While traditional model making and automotive fixture manufacturing continue to be part of the business, contract manufacturing now accounts for about two-thirds of the business. Technological development is being driven in particular by customers in the mechanical engineering sector for the plastics industry—such as those producing film extruders or cooling units—as well as by requests from the racing and aviation industries.

The Limits of Manual Measurement Techniques

With these new customer groups, the requirements for quality assurance also changed significantly. “In the past, hand-held measuring machines were sufficient; in some cases, measurements were taken directly on the machine, where chips were falling,” recalls Peter Koch, Head of Jig and Die Making at Dörr. But complex parts—such as components for plastic processing machines or parts for the aerospace industry—now require many measurement points and comprehensive documentation.



Tolerances were the key driver behind the investment in new measurement technology. “In contract manufacturing, it is becoming increasingly common for customers to request that components be measured not only for fit but also for form and position tolerances,” explains Nasir Koubaa, Head of Precision Engineering at Dörr. These requirements could no longer be reliably met using the existing manual measuring equipment. It became clear that in order to remain competitive and deliver the required validation along with all measurement reports, a CNC-controlled solution was needed.

Selection Criteria: Support Trumps the Datasheet

When searching for a suitable coordinate measuring machine, Dörr took an analytical approach. First, typical component sizes were defined and then rounded up to accommodate future, larger projects. After conducting market research and speaking with customers, the team then narrowed its focus to two suppliers of measuring machines.

Interestingly, in the end, it wasn't the technical specifications that tipped the scales—these were comparable among the favored manufacturers—but rather the "soft factors" of service and support. "For us, the deciding factor was that we felt more confident about the support. That we aren't just one of many," said Koch.

This is where Klostermann came into play; the company acts as an authorized representative for WENZEL measurement technology in North Rhine-Westphalia, among other brands. A decisive moment was the proactive consultation provided by the sales engineer, who took a deep dive into the on-site structural conditions rather than simply selling a standard solution from a catalog. The main argument against large corporations was often the fear of anonymous ticket systems. "We'd end up in a ticket system where I'd have a different consultant every time—that's not what we wanted," Koch explains, referring to the decision against a competitor. The regional proximity and the direct line to the technician, who also conducts the training, were seen as key advantages for rapid knowledge transfer.

The Infrastructure Challenge: The Measurement Room as a System Solution

However, purchasing the machine was only the first step. A valid measurement result in the micrometer range requires stable environmental conditions. "If you want a result that's reliable, you have to ensure that the room temperature stays within a range of 20 degrees plus or minus two Kelvin," Koch emphasizes. Since the machine was to be placed close to the production area to minimize travel time, an enclosure was essential.

Planning the measurement room presented the team with structural challenges, particularly regarding ceiling height. This is where the advantage of a partner who goes beyond simply selling machines became apparent. Klostermann not only supplied the measurement technology but also handled the design of the measurement room, including the climate control system. "We needed a solution for the available height, and we were offered a machine with an 800 Z-axis that had just been added to the product line and was a perfect fit," says Koch.

The new measurement room was deliberately designed to be larger so that components could be conditioned for 24 to 48 hours prior to measurement—a critical factor for large steel or cast components. This "all-inclusive package," in which the machine, room envelope, and climate control system were all planned by a single provider, significantly minimized interface risks for Dörr.

Cultural Change in Quality Assurance

The introduction of a programmable CNC measuring machine represents a significant technological leap for employees compared to manually operated systems. How is this transition being managed among the workforce? At Dörr, the company relies on a culture of "lone wolves" in the positive sense: employees who enjoy delving deeply into topics.

Employees from the company's own production department—former machinists and model makers—took on the task of programming the new machine. "We have someone with a background in CNC programming and a colleague from metrology. They complement each other well," reports Markus Borghoff.

This in-house expertise is crucial. Dörr's strategy is to ensure that designers and programmers maintain a connection to the practical side of the business. "During vacation time, some of the programmers even head down to the machines to stay in the loop," explains Borghoff. This flexibility and deep understanding of the manufacturing process greatly facilitate the development of effective measurement strategies. Quality assurance is thus not an isolated "police post," but is closely integrated with production.

The operators continue to perform self-checks, while the measurement room is used for final validation and complex analyses.

Quality as a Strategic Competitive Advantage

Investing in a high-end measurement lab is certainly a significant undertaking for smaller medium-sized companies, but it is strategically necessary. In times of economic uncertainty, when others are holding back on investments, Dörr is forging ahead: "We operate in the high-end segment in terms of quality and always strive to work innovatively and with a forward-looking approach," Borghoff summarizes.

This strategy is paying off: Customers who had left due to lower prices often returned because the quality elsewhere wasn't up to par. What's more, the new measurement capabilities enable Dörr to act as a development partner. In current projects, components from customers are not only manufactured but also actively improved through testing and precise measurements to increase their output.

Author: Wolfgang Kräußlich
Pictures: @Mike König Photography

Gerg relies on WENZEL for quality assurance

Precision and Efficiency Redefined

GERG GmbH, based in Hohenthann, Bavaria, specializes in the manufacture of components made from a wide variety of materials, including steel, aluminum, titanium, glass/carbon fiber, and plastics. These components are used in industries such as motorsports, aerospace, mechanical engineering, semiconductor technology, and the automotive sector.

“Our components range in weight from a few grams to several metric tons—and every single component requires the highest precision in manufacturing,” explains Stefan Rocheanu, a metrology technician in quality assurance at GERG. “For the aerospace industry, we manufacture high-end components that meet the customer’s most stringent and precise requirements, which we must then verify for acceptance. In motorsports, too, every part must function with pinpoint accuracy.”

Complex Requirements for Measurement Technology

In order to verify the quality of the components manufactured with the highest precision by GERG and to ensure they meet customer requirements, reliable measurement methods of the same caliber are necessary. The components often feature complex geometries and tight tolerance ranges, such as maximum form deviations of 0.02 mm on large, three-dimensional surfaces, flatness tolerances of less than 0.02 mm on often very large flat surfaces, as well as very demanding positional tolerances of 0.01 mm. “We also have to measure rotationally symmetric components at a depth of over 1,000 mm with a concentricity of up to 0.04 mm,” explains Rocheanu.

Before the WENZEL solution was introduced, measuring large components was only possible to a limited extent.

These were either inspected internally using optical methods or measured externally by partners using tactile methods—a process that involved considerable time and expense. The LH 2617 from the LH Gantry series, the largest custom-built measuring machine developed and built by WENZEL to date, set a new standard.

Measuring machine sets new standards

The LH 2617 gantry-type coordinate measuring machine from WENZEL was specifically developed for the precise inspection of large-volume and heavy components. With its innovative design, it offers the highest levels of reliability and precision. By acquiring this measuring machine, GERG was able to expand its inspection capabilities accordingly and establish the capability to perform in-house tactile measurements of large components.

With air bearings on all axes and elevated guides on the Y-axis, the coordinate measuring machine features a particularly stable design that ensures stability even during dynamic movements guarantees reliable results. The self-supporting machine body, equipped with optional active vibration damping, does not require a separate foundation. Automatic temperature compensation and the option to use a rotary table further enhance the machine‘s flexibility.

Why WENZEL?

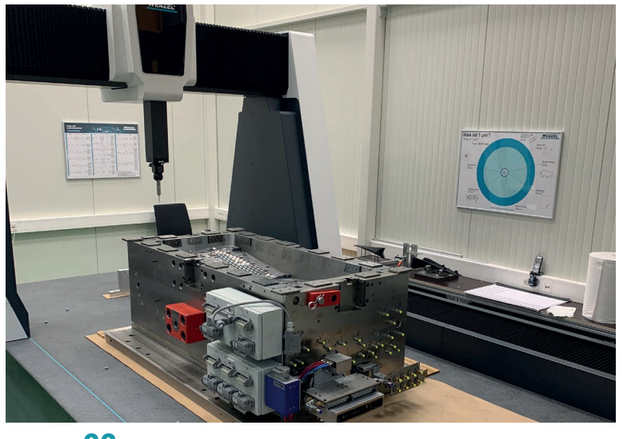
“The precision-machined components must be measured and documented efficiently and reproducibly.” The quality assurance process at GERG GmbH is clearly structured. The LH 2617 ensures that measurements are performed with precision and produces reliable, reproducible results. “We use the results of interim and final measurements to verify process stability or, if necessary, to optimize it.”

Successful Integration

Optimized Quality Assurance in Mold Making

The Finke Group, a well-established company in the field of mold making specializing in injection molding, has successfully integrated a WENZEL LH 1512 coordinate measuring machine into its manufacturing processes. This measurement solution has played a key role in ensuring the manufacturing quality and dimensional accuracy of its products.

The Finke Group manufactures a wide range of parts that are incorporated into various end products. The parts manufactured include injection molding tools, gauges, removal grippers, and assembly fixtures. These are used for a wide range of applications, from individual tools to complex GID articles and cube-shaped tools in the embossing process. The tools range in size up to 2,800 × 1,500 mm with a total weight of 30 metric tons.



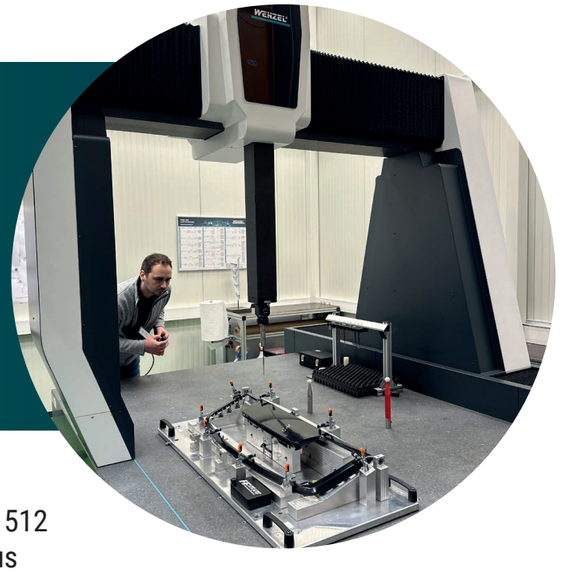
High precision for a wide range of applications

By using the WENZEL measuring system—in particular, the LH 1512 coordinate measuring machine—the Finke Group can precisely verify the quality of its tools and products. This enables accurate measurement in accordance with the required specifications, as well as effective monitoring during tool modifications. Component measurement is used to verify specifications, detect warpage, and perform in-process measurements during plastic production.

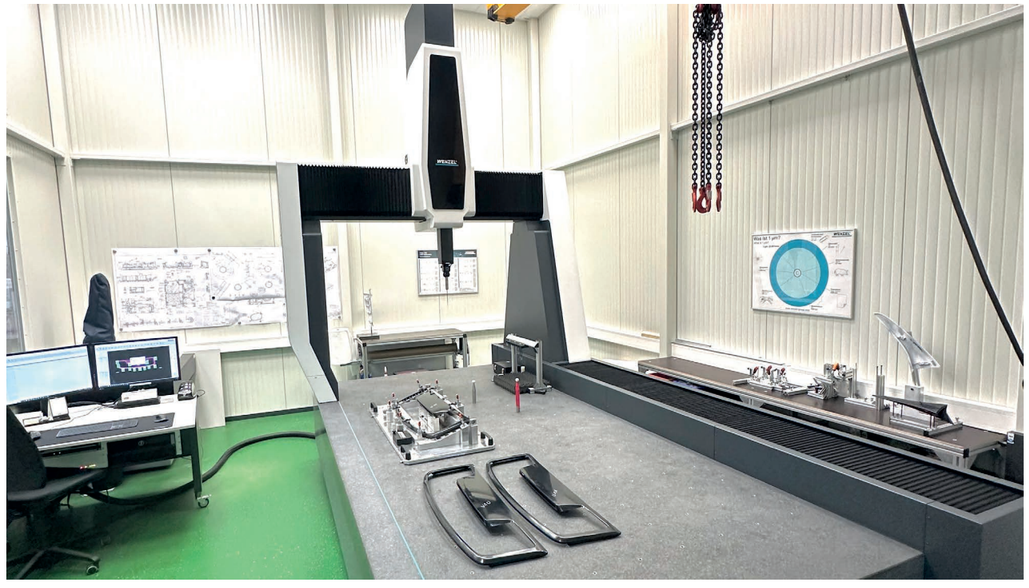
The main task is to ensure the dimensional accuracy of the plastic products being manufactured. This includes measurements for initial sample inspection reports, in-process measurements during production, and ensuring the accuracy of machining operations. Before the WENZEL measuring system was introduced, an articulated measuring arm was used. However, this was no longer accepted by customers due to its insufficient accuracy. The required measurement accuracies are based on the customers' specific requirements regarding SPC (Statistical Process Control) dimensional inspections. The WENZEL CMM provides the accuracy needed to meet these requirements.

A Solution-Oriented Collaboration

The Finke Group uses the WENZEL LH 1512 CMM in combination with a PH 10M Plus rotary-swivel head and a Renishaw SP25M contact probe system. For optical measurement, the highly flexible WENZEL SHAPETRACER 3D line scanner is used to capture and process point clouds in order to effectively handle the measurement tasks.



This multisensor solution offers broad coverage of measurement requirements with high accuracy in accordance with the specifications. The measurement systems are housed in a specially equipped measurement room located near the production area. This enables efficient and timely measurements to be performed during the manufacturing process.

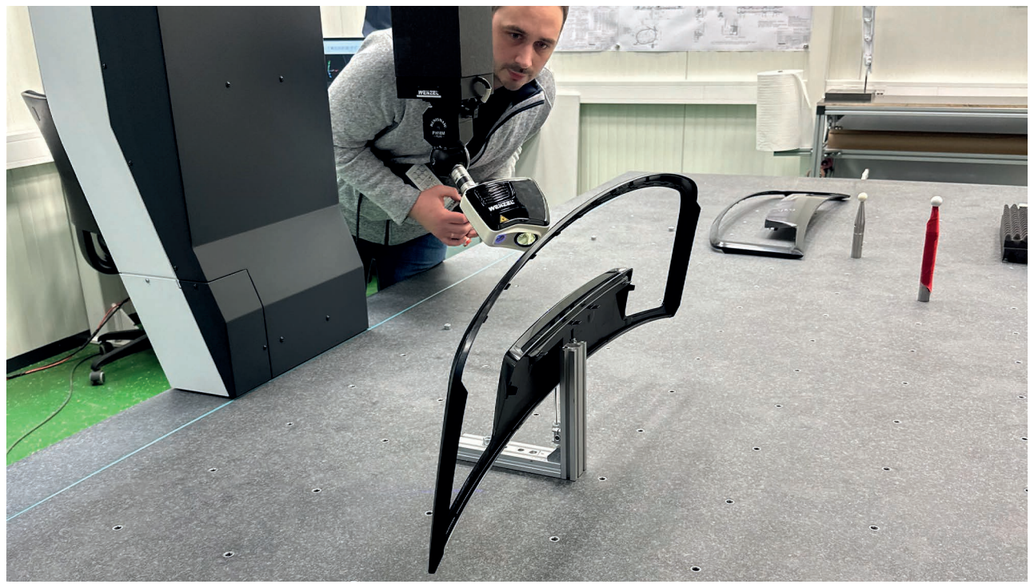


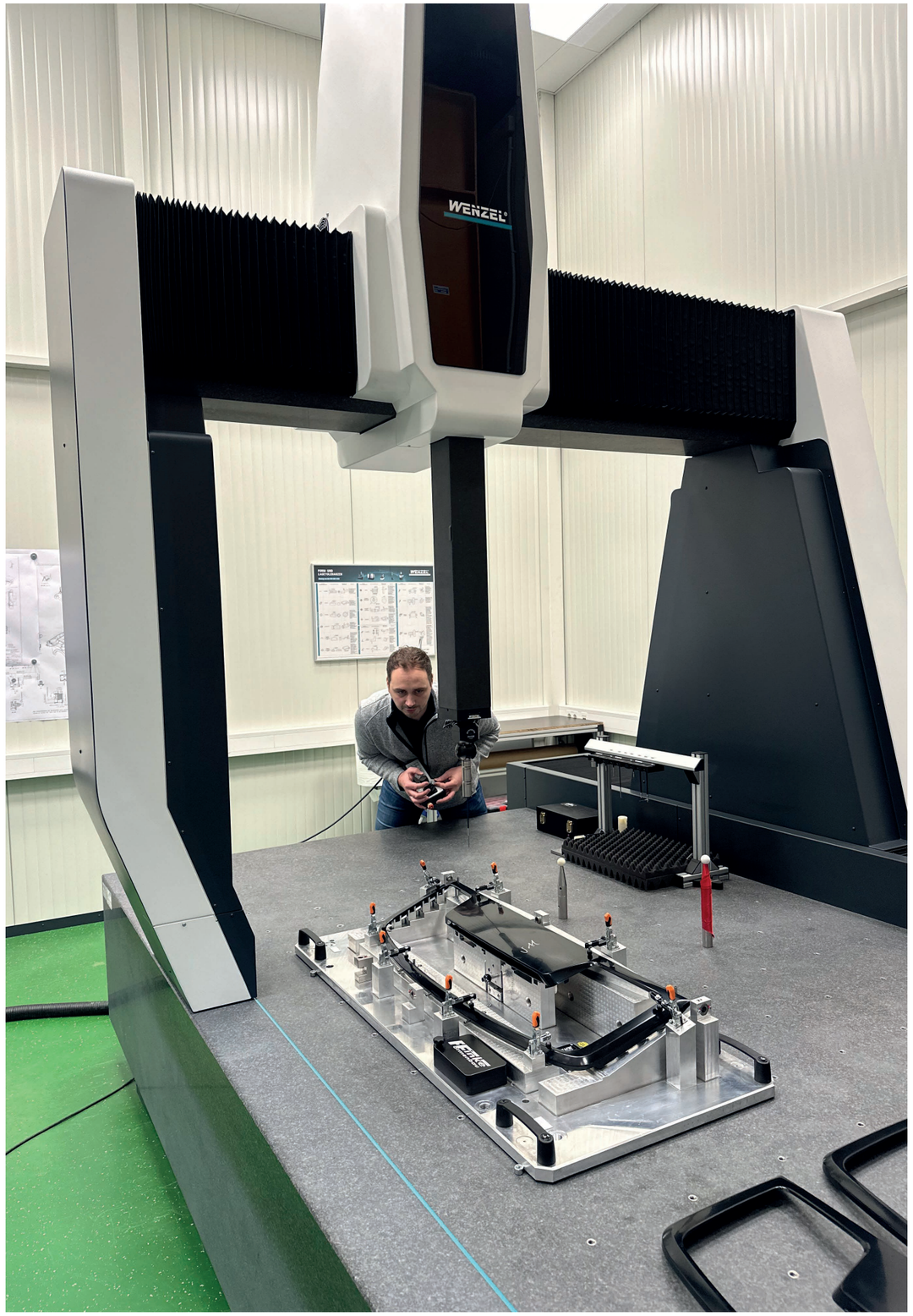
“The selection of WENZEL measurement systems was based on various criteria, including coverage of a wide range of applications with high accuracy, cost-effectiveness, machine availability, and user-friendly, ergonomic operation,” explains Nick Nolte, measurement technician and quality planner at the Finke Group. “We also particularly appreciate WENZEL’s outstanding customer support and responsiveness, as well as their solution-oriented collaboration. The ability to rely on a trusted point of contact when problems arise is of great value,” Nolte continues.

The successful implementation of WENZEL measurement systems has enabled the Finke Group to optimize its manufacturing processes and further improve the quality of its products. The partnership with WENZEL underscores both companies’ commitment to technical excellence and customer satisfaction.

About the Finke Group

Since 1982, Finke has been synonymous with uncompromising quality and top performance in mold making. Originally founded as a manufacturer of glass molds, we have evolved since the 1990s into a leading manufacturer of injection and die-casting molds for the plastics industry. In 2012, we expanded our offerings to include “application engineering” and began specializing in the prototyping of injection molds and the production of plastic injection-molded parts. Our goal has always been—and remains—to help our customers move forward with creative ideas, expert know-how, and a passionate enthusiasm for technical innovations. No matter how the years come and go, our commitment remains the same: We want to help our customers reach the top of the podium.





Precision for High-Performance Engines

How WENZEL Messtechnik Supports FAW in Engine Development

From Concept to Powerhouse

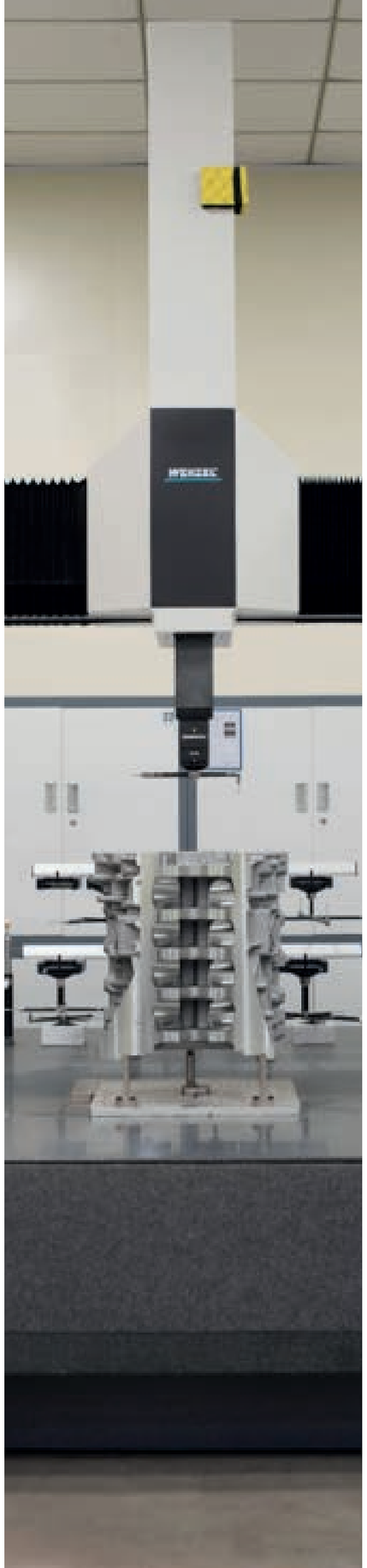
The automotive industry never stands still—and with it, the demand for state-of-the-art engine technologies continues to grow. FAW, one of China's largest automakers, has risen to this challenge and created something extraordinary: China's first V8 engine with direct injection and supercharging. The V8TD engine powers the luxury models Red Flag L5 and LS5—with a peak output of 485 kW and a torque of 850 Nm.

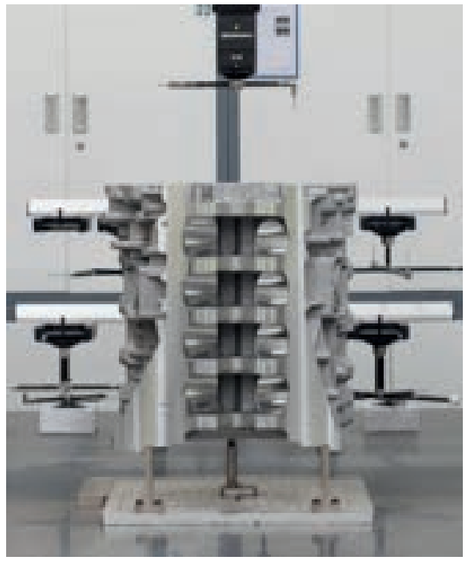
But it was a long road to get there. During development, FAW's New Energy Powertrain Division faced a crucial question: How can absolute precision be ensured with such complex structures? After all, with a high-performance engine like the V8TD, every hundredth of a millimeter counts.

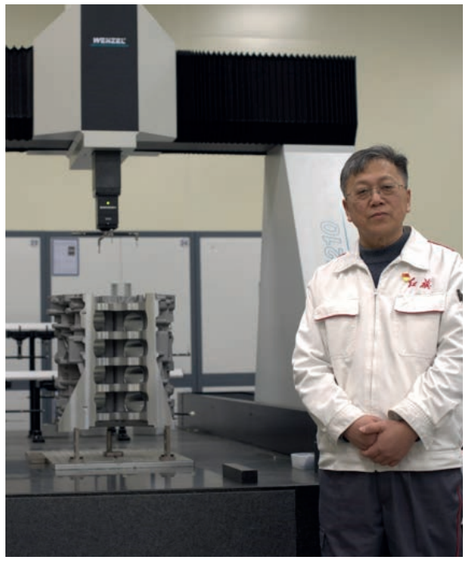
Trust in Precision—WENZEL as Your Partner

To ensure the highest levels of quality and dimensional accuracy for the engine components manufactured with extreme precision by GERG at iUm, FAW opted for measurement technology from WENZEL. The WENZEL LH 1210 coordinate measuring machine was deployed—a system known for its stability, accuracy, and ease of use.

"We tested various systems—but the WENZEL LH-1210 CMM won us over with its precision, reliability, and service," says Duan Weiping, shift supervisor in the metrology lab at FAW. "Especially with the intricate components of the V8 engine, we need absolute repeatability—and WENZEL delivers this with impressive consistency."







The secret to the LH series' success lies in its robust granite construction, combined with integrated air-bearing guides and high-precision guide surfaces. These ensure excellent long-term stability and thermal insensitivity—two critical factors when it comes to micrometer precision. High-resolution scales and state-of-the-art sensor technology enable precise measurement results even with complex geometries and free-form surfaces.

Greater efficiency, less effort

In everyday work, it quickly becomes clear that precision saves time. In the past, FAW had to inspect the cylinder block, cylinder head, and crankshaft on three different measuring machines. Today, a single WENZEL coordinate measuring machine handles the task—faster, more precisely, and in a single pass. "This has made our work much easier and significantly accelerated the development of the V8 engine," says Duan.

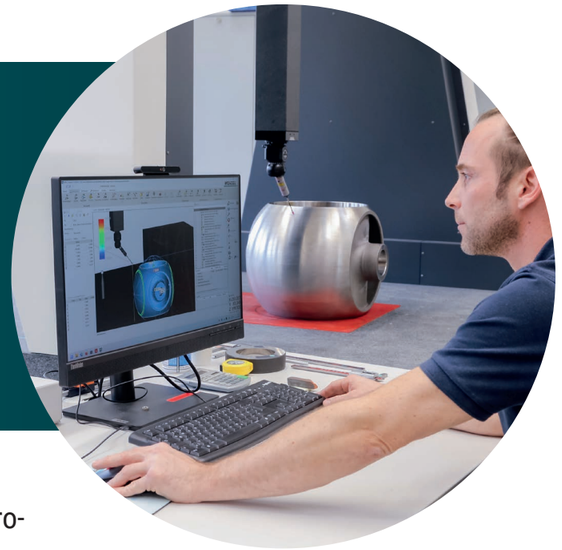
Close collaboration with the WENZEL service team was crucial in this process. On-site training and technical support ensured that FAW could fully leverage the measurement system's potential. The result: higher productivity, more reliable data, and a significant leap in quality in engine development.

The success of the V8TD engine is more than just a technical milestone—it demonstrates how precise measurement technology can make all the difference. For FAW, the WENZEL LH-1210 is not just a measurement system, but a key tool on the path to high-performance, efficient, and high-quality engines.

"We look forward to more innovative products from WENZEL and a long-term partnership," says Duan. "After all, precision is the foundation upon which the future is built."

Klinger Fluid Control Expands Quality Assurance with WENZEL LH1515

Measure Larger for Greater Quality Assurance



Manufacturers of valves for industrial applications operate in a challenging metrological environment. At Klinger Fluid Control GmbH in Gumpoldskirchen, the range of components extends from small parts weighing just a few grams to massive valve components weighing several hundred kilograms. The products cover nominal diameters from DN15 to DN1000 and include, among other things, ball valves and piston gate valves for the process industries. The products are primarily manufactured from carbon steel, stainless steels, or duplex materials. The quality assurance requirements are correspondingly high.

"Our parts are often very large and, at the same time, geometrically complex. Ball valves and piston gate valves, in particular, have many functional surfaces that must fit together precisely," explains Harald Dudeschek, Head of Measurement Technology in Quality Assurance,

Klinger Fluid Control. For sample parts, all components are always measured upon receipt. "That amounts to about 20 to 30 items per day. For production parts, the sampling rate is typically five to ten percent," explains Dudeschek. The measurement programs take between five and fifteen minutes and include between 50 and 150 measurement points. While as many points as possible are recorded during initial sampling, series testing focuses on those characteristics that allow for direct conclusions about product quality.

Growing Testing Responsibilities in Quality Assurance

The existing coordinate measuring machine, a WENZEL LH87, was installed back in 2016 and has proven itself in daily use. In recent years, however, the operating environment has changed. Klinger Fluid Control is also increasingly relying on external suppliers. For quality assurance, this automatically means more inspection tasks during incoming goods processing. "As we collaborate more closely with external suppliers, the volume of inspections automatically increases," says Dudeschek. "This also heightens the importance of measurement technology." At the same time, the requirements regarding the size of the components to be inspected are growing.

"Our existing machine would no longer have been able to handle the steadily growing testing volume in the long term. In particular, we would no longer have been able to fully measure larger components with it," he adds. It was therefore clear to the quality assurance team that the measurement technology needed to be expanded.

A Conscious Choice for WENZEL Technology

Various approaches were considered during the evaluation of possible solutions. The option of a used WENZEL measuring machine was also briefly discussed.

"In principle, there's no reason not to use a good used system. Many components are replaced anyway—bearings, belts, controls, or software. Basically, only the granite remains," explains Denis Firulović, technical sales representative at GGW Gruber & Co GmbH, which distributes WENZEL's product portfolio in Austria. Ultimately, however, Klinger decided to go with a new system. "The big advantage for us was that we could continue using our existing measurement programs right away," emphasizes Dudeschek.

"This enabled us to integrate the new machine into our ongoing operations very quickly." The long-standing and reliable partnership with WENZEL's Austrian distribution partner, GGW, also played an important role in the decision.

Alterations required

Installing the new machine initially required extensive infrastructure changes. In order to be able to bring the equipment into the measurement room at all, an existing false ceiling had to be removed. In addition, a new crane runway was installed so that even heavy components could be moved safely. "We had to adapt the entire infrastructure around the measurement room," reports Dudeschek. "Now we can bring larger dashboard components directly from the lorry into the measuring room." Naturally, such modifications also affect a project's timetable. "We always coordinate deadlines closely with the customer. It would have made little sense to deliver the machine whilst the work was still ongoing," adds Firulović.

Measurement technology for large workpieces

The system installed is a WENZEL LH1515 gantry-type machine. The custom-built machine has a measurement volume of (X/Y/Z) 1,500 x 2,500 x 1,500 mm. This provides significantly more space in the measurement chamber for large valve components. "The LH series is designed precisely for applications like this. Large components, high stability and, at the same time, the ability to scan complex geometries efficiently," explains Firulović in detail.

The system is equipped with a WPC-4 controller and an HT400 control panel, as well as a PC running Windows 11. The WM-Quartis measurement software is used, supplemented by several modules for advanced analysis and scanning applications. The measurement technology comprises a Renishaw PH10M Plus rotary-swivel head combined with an SP25M probe module, which enables both point measurements and continuous scan measurements along complex geometries.

Greater efficiency in the metrology laboratory

The greatest advantage of the new machine becomes apparent in day-to-day operation. Thanks to the larger measurement volume, several identical components can be clamped in place at the same time. Whilst one part is being measured, further parts can already be prepared. This significantly reduces set-up times. "This brings enormous benefits, particularly for series-produced components. When several parts are on the machine at the same time, we save a lot of time on set-up in our day-to-day work," says Dudeschek, highlighting a particular added benefit of the larger measuring machine.

Goods Receipt supports measurement technology

In parallel with the technical expansion, the organisational processes within quality assurance are also being further developed. A key approach here is to integrate the incoming goods inspection of production parts more closely into the measurement process using measuring machines "The aim is to enable our colleagues there to use our existing measurement programmes as well. This will give us greater flexibility in quality assurance," explains Dudeschek. He notes, however, that appropriate training – which is coordinated and delivered in collaboration with our measurement technology partner GGW – is an essential prerequisite for this.

Collaboration based on partnership

As well as the technical solution, collaboration with the sales partner also plays an important role for Klinger Fluid Control. "When we ring GGW, we immediately have a knowledgeable contact person," says Dudeschek. "Whether it's about software, measurement technology, maintenance or training." For Firulović, too, close coordination is an essential part of such projects. "We always try to develop the best solution together with the customer. Close cooperation is crucial, particularly in projects like these," he emphasises in conclusion.

Autor: Georg Schöpf, x-technik

AUKOM seminars at WENZEL

Far more than advanced training

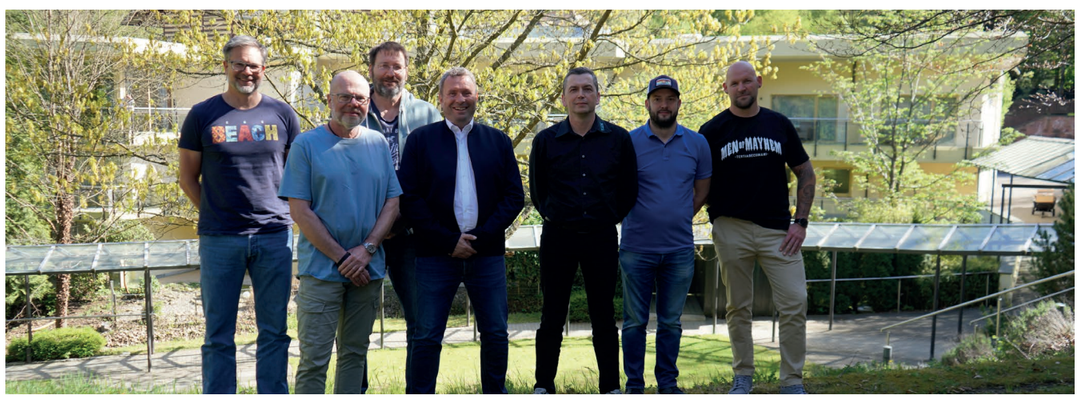
At Villa Marburg, with its ideal learning environment, in-depth specialist knowledge, practical training and personal interaction come together. Participants from a wide range of sectors report lasting learning outcomes and genuine added value for their day-to-day work.

“In the automotive sector in particular, we need to understand exactly what our customers expect. AUKOM helps us to interpret drawings correctly, carry out cost-effective measurements and conduct technical discussions with confidence.”

Thomas Reich, Head of Quality Assurance and Measurement Technology at Huissel GmbH, regards AUKOM as a key factor in his company’s success. He particularly values the combination of theory and practice: “With AUKOM, I can play a proactive role in shaping the interfaces between design, manufacturing and measurement technology.”

> AUKOM seminars give participants the confidence to use modern measurement technology; they improve communication between departments and help companies make their processes more efficient and cost-effective.

The fact that the content can be directly applied to day-to-day work is demonstrated time and again in practice. Christian Bischke from Deloro Wear Solutions reports: “Through AUKOM, we have identified areas for improvement and have been continuously tapping into them. Today, we are even better placed to meet our customers’ requirements. Personal development within the team is also particularly exciting: “You can see how positively staff are developing professionally and becoming increasingly confident in dealing with complex measurement issues. The key to success lies in WENZEL’s experienced trainers, who deliver practical content within a learning environment that really sticks in the memory.”



AUKOM e.V.

AUKOM

Zertifikat

Max Mustermann

hat sich durch die bestandenen Abschlussprüfungen und Seminarteilnahmen zum **AUKOM Messtechniker** qualifiziert.

Stufe 1 (2010-10-21)
Stufe 2 (2012-05-25)
GD&T (Form und Lage) (2014-05-21)
Stufe 3 (2014-05-09)
Messtechniker Update (2026-04-29)

Gültigkeit bis: 2031-04-29
Zertifikats-Register-Nr.:
Braunschweig 2026-04-29

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The AUKOM certificate explained in brief:

AUKOM 1 / AUKOM 2 / AUKOM GD&T are required for the AUKOM Measurement Technician Certificate.

Each additional AUKOM seminar will be recorded on the certificate.

In order to maintain the certificate and keep your knowledge up to date, a refresher course is required after five years at the latest. This can be achieved through the AUKOM Measurement Technician Update, AUKOM 3 or – particularly in the field of form and position tolerances, where there is always something new to learn – by attending the AUKOM GD&T course again.

Michael Richter, a metrology technician at TD Deutsche Klimakompressor GmbH, who is attending his fifth AUKOM seminar at WENZEL, shares his experiences with us in a video. Scan the QR code and find out why Mr Richter chooses to attend his training courses at WENZEL.

An entrepreneur driven by passion and a sense of responsibility

Bavarian State Medal for Dr. Heike Wenzel

Wiesthal / Munich, 20 November 2025 – Dr Heike Wenzel, Managing Partner of WENZEL Group GmbH & Co. KG and President of the Aschaffenburg Chamber of Industry and Commerce, has been awarded the Bavarian State Medal by Bavaria's Minister for Economic Affairs, Hubert Aiwanger, in recognition of her outstanding services to the Bavarian economy. The award was presented during a formal ceremony in Munich on 19 November 2025.

In her speech, Dr Wenzel, speaking on behalf of all the award winners, paid tribute to the collective efforts of the many people behind this honour:

"This award fills us with great gratitude and – I believe this applies to all of us – with pride too. Pride – not in a single achievement, not in a single moment, but in many years of working together with our staff at our sites and in our regions."

She went on to emphasise that awards are always a call to take on responsibility and further strengthen Bavaria as a business hub: "Although this medal bears a name, it also belongs to the people in our companies, our families and our organisations who pitch in every day."

Speaking as an entrepreneur driven by passion and a sense of responsibility, Dr Wenzel explained:
"I am working to ensure that my children will one day be able to decide whether they want to pick up this baton and carry it forward into the next generation."

Responsibility and commitment across generations

The State Medal for Special Services to the Bavarian Economy is the highest honour awarded by the Bavarian Ministry of Economic Affairs – it recognises outstanding commitment and responsibility towards Bavaria as a business location. The award not only highlights the entrepreneur's personal achievements, but also the importance of owner-managed SMEs to Bavaria's economic success. Dr Wenzel has been a strong advocate for innovation, entrepreneurship and the future viability of Bavaria as a business location for many years.

For the Wenzel family, the State Medal marks a special moment in the company's history.

Her father, the company's founder Werner Wenzel, has also received several awards in recognition of his achievements – including the 'Bavarian State Prize for Innovative Development' in 1993, the 'Bavarian Quality Prize for Quality and Quality Management in the Skilled Trades' in 1996, and the Federal Cross of Merit on Ribbon in 2002.

A family business with a bright future

The WENZEL Group develops and manufactures precision measurement solutions for sectors ranging from aviation to medical technology – with its roots in Wiesthal for over 55 years and more than 550 employees worldwide. As a medium-sized company based in a rural area, WENZEL demonstrates how technological excellence 'made in Bavaria' can successfully hold its own in the global marketplace.

Dr Heike Wenzel: "We enjoy working here – we enjoy investing here. Let us shape the future of our state in a positive way – with less mistrust, more confidence, the courage to reform and a passion for entrepreneurship."

INNOVATION MEETS TRADITION

Whether in the automotive industry, aerospace or mechanical engineering – precision measurement technology is the foundation for stable processes and the highest product quality. At WENZEL, we offer bespoke solutions: from coordinate measuring machines and gear measuring systems to industrial CT systems and high-performance software. Our systems deliver reliable measurement results worldwide – efficiently, sustainably and 'Made in Germany'.

LEGAL NOTICE

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