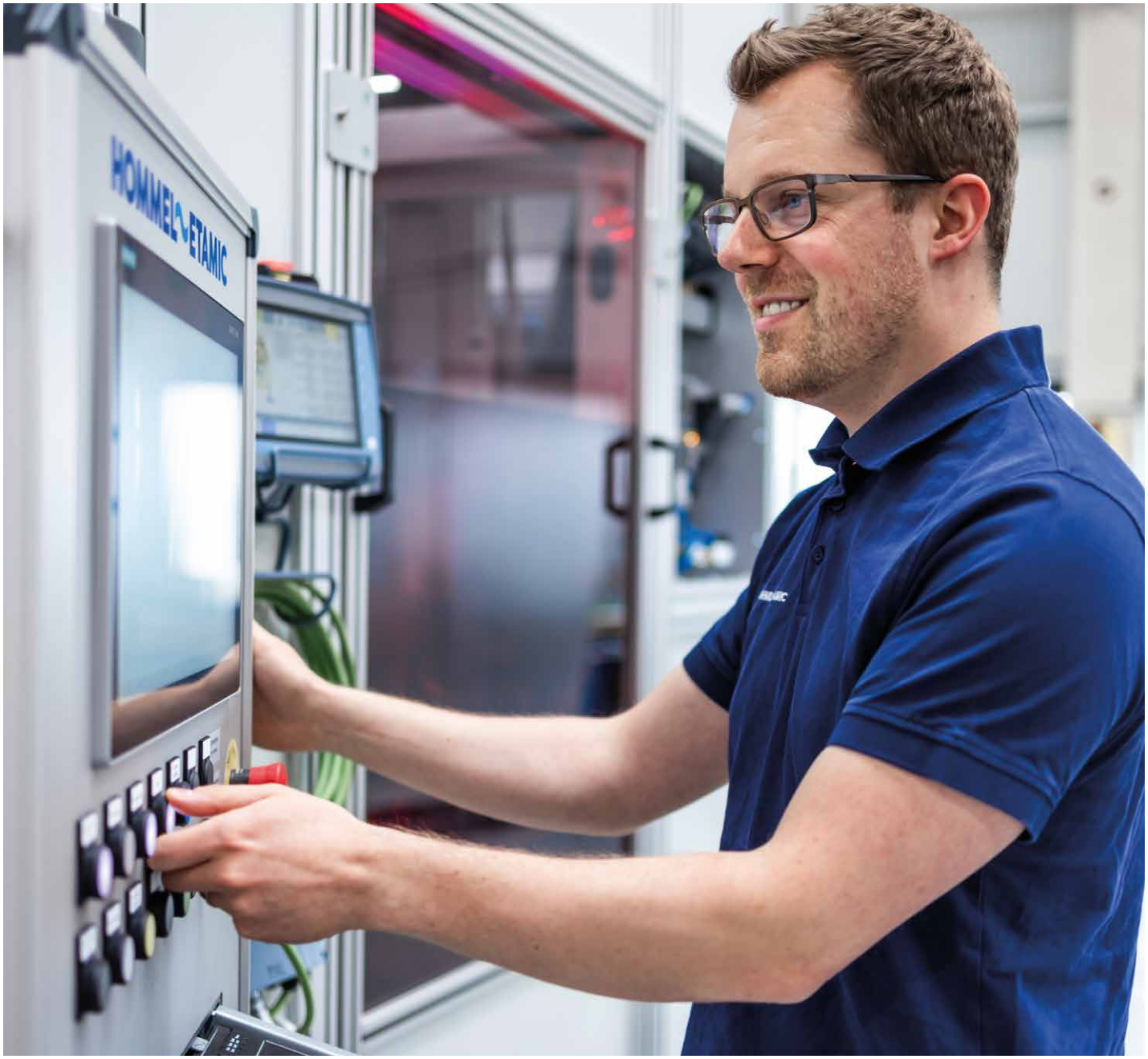
Industrial metrology

Measuring and testing solutions for **efficient manufacturing processes and high quality standards**



HOMMEL ETAMIC

A member of the JENOPTIK Group

www.hommel-etamic.com

Precision measurement and testing technology for your quality control

As a leading manufacturer and system supplier, HOMMEL ETAMIC offers a broad portfolio of measurement and testing solutions for industrial manufacturing processes. Our high-precision technologies include pneumatic, tactile or optical measurements of roughness, contour, form and dimensions, as well as optical inspection of machined surfaces. Comprehensive services, from the initial inquiry to a customized service package, round off our offerings.

As a full-service provider of measurement and testing solutions for manufacturing facilities and metrology labs, we offer you

- **maximum quality assurance through state-of-the-art systems**
- **cost savings through process reliability and process optimization**
- **software for reliable analysis and evaluation of results to ensure efficient production processes**

HOMMEL ETAMIC represents 150 years of experience in high-precision manufacturing metrology. The company was formed through the merger of Hommelwerke (founded in 1876) and ETAMIC (founded in 1947) and has been operating as JENOPTIK Industrial Metrology Germany GmbH since 2013. Our qualified staff are active all over the world. With our locations and sales partners in all major industrial regions, we are right there with you, ready to provide you with the best possible support as your reliable partner.

Global project management

When absolute precision is required in industrial manufacturing, our state-of-the-art measurement and testing systems make us the ideal partner. Our goal is to provide you with the best possible support at all times. Many customers worldwide already rely on our experience, as we offer them not only innovative systems but also comprehensive expertise in customized analyses.

Our solutions are flexible and versatile. We tailor our systems to your specific requirements in terms of measurement tasks, automation levels, and location. Our standard systems and custom solutions provide quality control data for a wide range of applications in your production process, ensuring smooth operations.

Seamless integration

Our measurement and inspection systems ensure the quality of workpieces throughout the entire production process: integrated into the production line, atline on the factory floor, or in the metrology lab.

With automated measurement and inspection technology, you can boost productivity in mass production and streamline your processes—whether inline or offline, whether through random sampling or 100 % control of all manufactured parts.

Depending on your requirements, we will work with you to determine the optimal measurement strategy and configure the appropriate system.

Solutions for your measurement and testing needs

Our systems are used in a wide variety of industries and applications. **Contact us!**

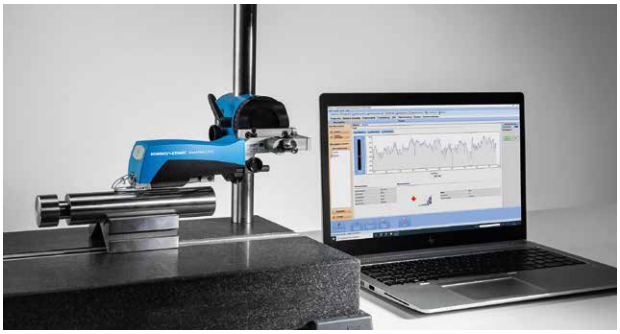
Waveline. Portable roughness and waviness measuring instruments for flexible use

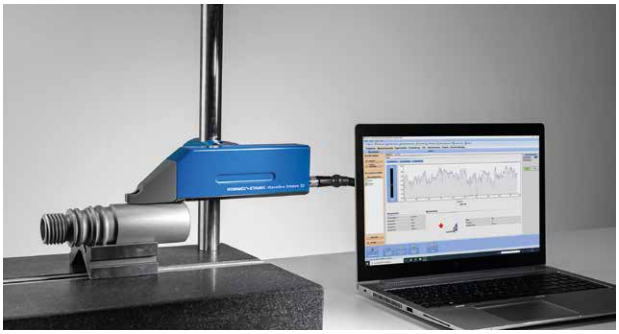
Whether in the workshop, on the production line, or in the lab, our portable, battery-powered roughness testers with ***Bluetooth*** technology* ensure precise measurements in accordance with current standards, no matter where you are.

- Measurement in all positions, including vertical & overhead
- Wide selection of roughness probes
- No readjustment of the probes required
- Secure mounting of the traverse unit on the workpiece
- Optional measuring stations for stationary use
- PC-based evaluation with Evovis Mobile

Waveline W5
- Easy operation via a click wheel
- Tolerance assessment at a glance
- Up to 800 measurements on a single battery charge
- Optional printer for immediate documentation

Waveline W10
- Intuitive operation via a large color touchscreen
- Control unit with built-in printer, roughness standard, and rest & barrel jack for the traverse unit
- Probe can be tilted 90°; transverse probing is possible





Waveline W15 set | Includes software Evovis Mobile
- Various measurement speeds
- Integrated start button for one-handed operation
- Export of parameters and profiles
- Flexible programming and logging

Waveline W40 set | Includes software Evovis Mobile
- Motorized probe lowering and lifting
- Supports reference plane and skid probes
- Measurement of roughness, primary & waviness profile
- Variable measuring speed

*except Waveline W40

Portable roughness measuring instruments | **Discover now:**

Waveline. Modular systems for roughness, contour, topography, and twist measurement

With a unified system design and state-of-the-art probe systems featuring quick-change adapters, our stationary measuring systems offer maximum flexibility and efficiency in day-to-day measurement tasks.

- Modular design, expandable at any time
- High-resolution probe systems for tight tolerances
- Quick and easy change of probe system
- Automatic, electronic probe detection*
- Evovis software for a wide range of analysis options
- Numerous options for specific measurement tasks

Waveline W600

- Robust and flexible measurement setup
- Manual height adjustment
- One interface for roughness or contour probing systems
- Optimal accessibility to the measurement points

Waveline W800

- High measurement accuracy thanks to robust mechanics
- Probe mounting below the traverse unit
- Control panel for convenient, direct operation
- Measuring columns and traverse units in various lengths

Waveline W900

- Excellent measurement accuracy
- Fast positioning speed
- Mounting for a second roughness probe
- Extensive automation options

Probe systems with quick-change adapter QCA

- TKU400 for roughness, Digiscan for contours, Surfscan & Nanoscan for combined measurement in one run
- Quick changeover without tools
- Automatic setup after probe change

*for Digiscan, Surfscan & Nanoscan

Stationary surface measuring systems | **Discover now:**

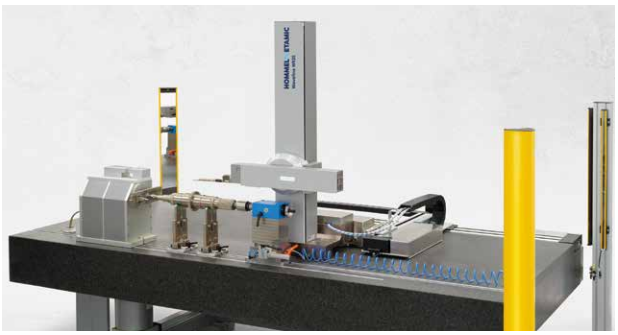
Waveline. Semi-automatic & fully automatic measuring solutions for manufacturing processes

For automated measurements, Waveline W800/W900 systems are customized to perfectly meet specific measurement requirements. We also design measurement stations that are specifically tailored to your needs.

- Robust measuring stations for production environments
- Flexible system design for a wide range of applications
- Comprehensive safety features
- High reliability thanks to proven technology
- Easy creation of CNC measurement programs
- Transfer of results to statistical analysis software

Optional CNC axes & fixtures
- Workpiece-specific applications
- Independent, simultaneous CNC axes
- Custom fixtures, optionally with automatic workpiece identification

Optional handling systems
- Operator-independent processing of parts magazines
- Fully automatic probe arm change & probe arm detection*
- Interfaces to various measurement and handling systems



Waveslide | Semi-automatic measuring stations
- Manual, simple positioning of the workpiece (alternatively of the measuring column) via air slide
- Suitable for large and heavy workpieces
- Flexible use for roughness & contour measurement tasks

Wavemove | Fully automatic measuring stations
- Measurements also on large and heavy workpieces
- Rotating measuring column and probe rotation module for optimal access to the measurement points
- Measurements at various angular positions

*for Digiscan, Surfscan & Nanoscan

Automation solutions for surface measuring systems | **Discover now:**

Opticline. Optical measuring systems for dimensions as well as form, position, and runout tolerances

Opticline systems provide you with a wide range of evaluation options for measuring shaft-type workpieces. Thanks to their automated processes, they deliver reliable, ultra-precise, and traceable quality assurance within your production workflow.

- **Fast**: complete measurements in seconds
- **Flexible**: universally applicable to various parts and features using optical and tactile sensors
- **Robust**: long-term stability even in harsh manufacturing environments; equipped with self-monitoring mechanisms
- **Easy to use**: intuitive operation with Tolaris Optic software

Opticline CS series

- Cost-effective solution, particularly for turned parts
- Simple, fast, and production-oriented workpiece inspection
- Measuring capacity: up to 900 mm in length and up to 140 mm in diameter

Opticline C series

- For the most demanding precision requirements
- Real-time processing and fast data transmission
- Measuring capacity: up to 1200 mm in length and up to 230 mm in diameter

Opticline WMS

- For particularly large and heavy workpieces and fully automated use in production
- Cascaded line-scan cameras for very fast scans with maximum resolution and measurement accuracy across the entire measurement range
- Measuring capacity: up to 1,300 mm in length and up to 320 mm in diameter

Opticline VMS

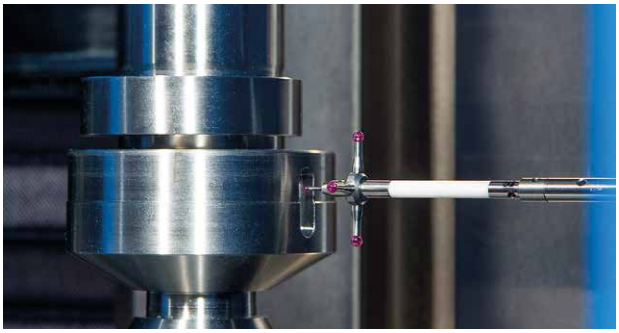
- Special machine design for measuring engine valves
- Very fast, cycle-time-optimized complete measurements
- Custom workpiece fixtures

Optical shaft measuring systems | **Discover now:**

Opticline. Easy integration into production lines and customizable system expansion

We offer solutions at various levels of configuration to integrate Opticline systems into your production process. With optional add-ons, we can tailor the systems to your specific needs.

- Integration of the systems into manufacturing processes
- High manufacturability through compensation for a wide variety of environmental conditions
- Multi-sensor capability for additional evaluation options
- Extensive accessories for specific applications
- A wide range of software functions and analysis interfaces



Multi-sensor capability | Optional tactile probe systems

- Extension to features that cannot be captured optically, e.g. gears, grooves, bore holes, and internal measurements
- Complete measurement of all features in a single cycle
- High flexibility thanks to fully automatic probe arm changes

System monitoring & compensation

- Integrated compensation for environmental influences
- Automatic detection and compensation of ambient and workpiece temperatures
- Autonomous calibration and verification of the system

Automation options

- Custom machine and interface configurations based on the desired level of integration, up to fully automated inline solutions with robotic workpiece loading
- Communication via state-of-the-art PLC interfaces
- Correction-value control: real-time adjustment of machining equipment based on the measurement results

System expansion | Optional accessories

- Wide range of accessories for customizing systems to specific applications
- Broad variety of clamping devices for workpiece mounting
- Ergonomic operating accessories
- Connectivity options for external sensors and measuring devices

Optical shaft measuring systems | **Discover now:**

Visionline. Optical inspection for detecting defects on technical surfaces

Visionline systems operate automatically and user-independently, can be integrated into automated production processes, and deliver reproducible, reliable results when inspecting surfaces for defects.

- Reliable detection of cavities, pores, scratches, etc.
- Fast inspection with short inspection cycles
- Solutions for bores and flat surfaces
- Sensors for a wide range of inspection tasks
- Feedback of results into the production process
- Clear documentation of inspection results with Evovis Vision

Visionline V100

- Application-specific selection of system components
- Cyclical system checks possible
- Easy calibration using a reference part
- Additional axes for automated processes

Visionline V200

- Compact system with minimal space requirements
- Inspection of bore diameters of various sizes
- Optional X and Y axes for precise workpiece positioning and automated inspection runs

Visionline V600

- Compact inspection system for manufacturing
- Multiple systems can be cascaded for various tasks
- Line integration and automated loading are possible
- Integration with QDA systems is possible

Visionline V800 & V900

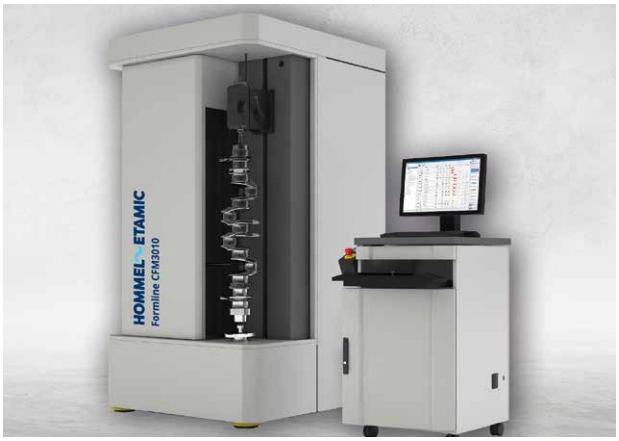
- V800 multi-sensor systems for offline or inline applications
- Custom-designed V900 systems with rotary table, gantry, or robotic loading

System solutions & sensors for optical surface inspection | **Discover now:**

Formline. Measuring systems for the precise measurement of form and positional tolerances

Our form measuring systems offer a wide range of analysis options for a variety of tasks in the field of form measurement for shaft-type workpieces.

- Accurate, standard-compliant measurements
- Easy to use with intuitive software
- Professional analysis of measured values
- Robust design for production environments
- High measurement accuracy
- Fully automated processes for fast measurements



Formline F900

- Fully automatic, high-speed centering and leveling
- Versatile for measuring form, roughness, and twist
- Vertical measuring axis available in various lengths
- Flexible access to external and internal measuring points
- High-resolution axes with very low interference
- Probe force adjustable via software
- Magnetic probe arm coupling for quick probe arm changes

Formline CFM3010

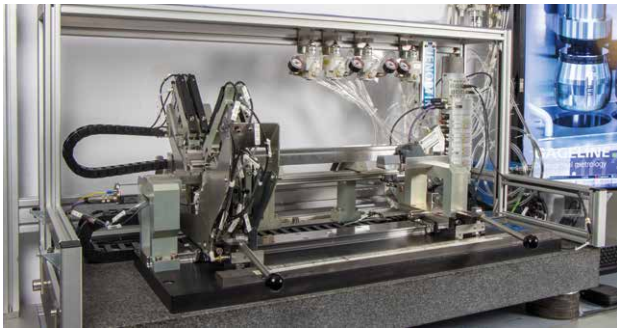
- For large and heavy shafts
- Reliable measurement results thanks to an air-bearing measuring head
- Excellent basic accuracy thanks to high-resolution measuring systems
- Robust design for use in manufacturing
- Optimized CNC processes combined with high measuring and traverse speeds
- Flexible use for various workpieces

Form measuring systems | **Discover now:**

Gageline. Pneumatic and tactile solutions for dimensional measurement tasks

Gageline offers customized solutions for high-precision dimensional measurements in virtually any environment, regardless of processes, cycle times, or specific production-related requirements such as temperature or cleanliness.

- High level of specialization and reliability
- Designed to meet the requirements of the measurement task, degree of automation, and location
- SPC, 100 % control, random sampling, etc.
- Additional tasks such as weighing, classification or sorting
- Control and evaluation via Tolaris software



Manual measuring devices

- Simple measuring chain consisting of just three components: display unit, pneumatic and/or tactile measuring tool, and standard; can be expanded with measuring satellites
- Easy to use for immediate results

Semi-automatic measuring systems

- Compact measuring stations for flexible use
- Manual loading, automated measurement cycles
- Applications: offline, pre- or post-process
- Early detection of tool defects

Fully automatic measuring machines

- Integrated into the production line
- High-performance software for test plan management, control of measurement and position sensors
- Optional classification and sorting of parts

System solutions & standard components for dimensional metrology | **Discover now:**

OTTO Vision. Optical inline inspection of stamped strips and small parts

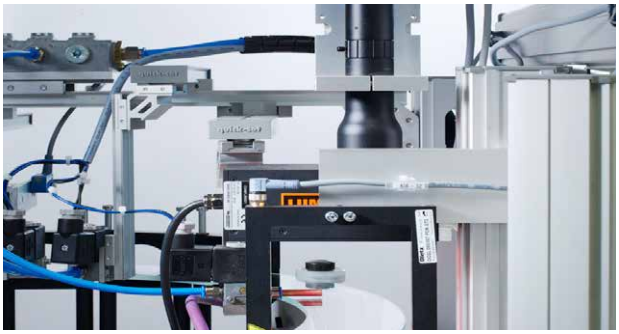
OTTO Vision high-end inspection stations are equipped with industrial image processing to help you implement a zero-defect strategy.

- Fully automated inline inspection, measurement, and sorting of all produced stamped parts
- Efficient changeovers & high stamping line utilization
- Real-time delivery and processing of inspection data for all manufactured parts
- Software OVIS Inspect with integrated AI

PSS-40/S | Inspection of stamped strips
- Compact, space-saving design
- Typically uses 2–4 cameras
- Interchangeable plate can be replaced from the front
- Manual cutting unit for strip or bad parts

PSS-40/MH | Inspection of stamped strips
- Space for up to 8 cameras
- Hood opens upward
- Easy access to the interchangeable plate
- Manual cutting unit for strip or bad parts

PSS-40/LCLW | Inspection of stamped strips
- Fully automated laser cutting and laser welding process
- Uninterrupted stamping production without stops
- Fully automated tensile testing after each weld
- Typically uses 2–4 cameras



Sorting machine MH-G | Optical inspection of small parts
- Inspection of visible geometries and surface defects, typically using 2–4 cameras from different angles
- Continuous part transport on a rotating glass ring
- Defect-based sorting

Optical inspection systems | **Discover now:**

Comprehensive support. Ensuring your productivity with a full range of services

We not only provide you with innovative and high-precision measuring systems, but also the appropriate services – from the initial inquiry to the individual customer service package. From our wide range of services, we will put together an individual package for you that is perfectly tailored to your requirements.

Service | Preventive & reactive services

- Application consulting: Application studies, start-up support, measuring program generation
- Maintenance & repairs: Remote service (teleservice), maintenance and repairs of measuring systems, repairs (technical service)
- Upgrades & retrofit: Optimization, retrofitting and extension, software updates and upgrades
- Spare parts: Probe replacement and spare parts service
- Other services: Relocation service, financing

Training | Good training & safe operation

- Training courses on the basics, operation and programming
- At our premises or at your site
- Standard or individual training courses
- Small groups for optimal learning success
- Qualified instructors with practical experience
- Webinars: Practice-oriented and location independent training on specific topics

DAkkS-accredited DKD calibration laboratory

Due to the constant use of measuring equipment and the associated wear and tear, the measuring accuracy can change unnoticed. Regular calibration of the device with the help of traceable standards is required, because only calibrated measuring devices ensure that meaningful and correct results are generated.

Our vibration-insulated and air-conditioned calibration laboratory (D-K-15030-01-00) is accredited by the Deutsche Akkreditierungsstelle GmbH (DAkkS) according to EN ISO / IEC 17025. Here we calibrate your standards which ensures direct tracing of the measuring equipment to the Physikalisch-Technische Bundesanstalt (PTB) and guarantees measurements and calibrations at the highest metrological level.

If a standard cannot be calibrated, a new one can be obtained from any of our facilities. For non-accredited parameters, we deliver simple factory calibration certificates or factory test reports.

Range of calibration services

Our DAkkS accreditation currently includes:

- Roughness – including ISO 21920
- Roughness on sheet metal standards (EN 10049)
- Depth setting standards (up to 5,500 µm)
- Step height standards (up to 5,500 µm)
- Roughness measuring devices with reference level probes
- Roughness measuring devices with skid probes
- Form standards
- Contour standards
- Cam standards
- Shaft measuring systems (Opticline)

Range of services
Discover now:

HOMMEL ETAMIC

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