ZEISS Industrial Quality Solutions

Portfolio

PRODUCTS | AUTUMN 2024

Content

Bridge CMMs

With a bridge-type CMM from ZEISS, you are opting for the highest accuracy and quality. The machines' design and software are precisely matched to meet every metrological requirement. The measuring devices feature a precise stylus system for fast measurements, even with complex parts. Additionally, the various solutions and systems can be tailored directly to your individual requirements.

ZEISS SPECTRUM family

With ZEISS SPECTRUM family – consisting of ZEISS SPECTRUM and ZEISS SPECTRUM verity you will enter the next level of certainty and productivity. Trust your parts due to more reliability in the measurement results.

ZEISS SPECTRUM

Upgrading to the next level in identifying defect parts by scanning complex geometry and surface.

ZEISS SPECTRUM verity

ZEISS SPECTRUM verity in combination with the sensor ZEISS VAST XT gold opens the world for active scanning.The coordinate measuring machine offers more reliability, stability, capability and flexibility.

Technical Specification

- Measuring Volume X/Y/Z from 7/7/6 to 9/18/6
- Accuracy E0 in µm from 1,7 + L/300

ZEISS CONTURA

ZEISS CONTURA The fifth generation is equipped with the mass technology and, thanks to a common interface, enables simple switching between different sensor technologies in just a few simple steps.

Technical Specification

- Measuring Volume X/Y/Z from 7/7/6 to 12/24/10
- Accuracy E0 in µm from 1,4 + L/350

ZEISS MICURA

Despite its small size, ZEISS MICURA makes no compromises when it comes to accuracy. ZEISS MICURA comes standard with the VAST XTR gold scanning sensor from ZEISS and VAST navigator technology.

Technical Specification

- Measuring Volume X/Y/Z 5/7/6
- Accuracy E0 in µm 0,7 + L/400

ZEISS PRISMO family

For more than 30 years, ZEISS PRISMO has been synonymous worldwide with high-speed scanning and maximum accuracy. PRISMO from ZEISS fully complies with ISO quality standards – a must in a world where precision matters the most.

ZEISS PRISMO
Besides the aspiration of not accepting compromises when it comes to precision, ZEISS PRISMO is ideal when maximum demands on precision have to be met.

ZEISS PRISMO fortis
ZEISS PRISMO fortis guarantees maximum precision in production environments at high temperatures of up to 40°C.

ZEISS PRISMO verity
Manufactured with the know-how from PRISMO ultra, ZEISS PRISMO varity increases the accuracy of ZEISS PRISMO and has an extented temerature range.

ZEISS PRISMO ultra
ZEISS PRISMO ultra represents the most accurate machine of the ZEISS PRISMO family.

Technical Specification
- Measuring Volume X/Y/Z from 7/9/5 to 16/42/14
- Accuracy E0 in µm from 0.9 + L/350 (PRISMO) / 0.7 + L/400 (at 22°C) Up to 2.7 + L/80 (at 40°C) (PRISMO fortis) / 0,7 + L/400 (PRISMO verity) / 0,5 + L/500 (PRISMO ultra)

ZEISS XENOS

ZEISS XENOS combines precision at the limits of what is technically feasible with a measuring range of nearly one cubic meter.

Technical Specification
- Measuring Volume X/Y/Z 9/15/7
- Accuracy E0 in µm 0,2 + L/1000 µm

Large CMMs

In sectors like energy and power generation, mechanical engineering and aerospace, CMMs with a broad measuring range and high load capacity are crucial. ZEISS MMZ family offers configurable products in multiple sizes, ensuring precise measurements of even the largest workpieces without any compromise in accuracy.

ZEISS MMZ family

ZEISS MMZ 1 table

ZEISS MMZ 1 table is suitable for all applications where accurate contact measurements are needed and where size, form and location measurements are evaluated with the highest accuracy – with the probe head ZEISS VAST XT gold.

Technical Specification

- Measuring Volume X/Y/Z 20/30/15 and 20/40/15
- Accuracy E0 in µm from 3,6 + L/250µm

ZEISS MMZ T

With a measuring range of up to 14.8 m^3, the ZEISS MMZ T offers the largest measuring range from amongst the table bridge-type measuring machines.

Technical Specification

- Measuring Volume X/Y/Z from 21/32/12 to 21/44/16 other on NSP request possible
- Accuracy E0 in µm from 2,4+L/400 µm

ZEISS MMZ M

Precise measurements at favorable acquisition costs – this was the goal when developing the ZEISS MMZ M.

Technical Specification

- Measuring Volume X/Y/Z from 20/30/12 to 30/60/20
- Accuracy E0 in µm from 2,2+L/400 µm

ZEISS MMZ G

The ZEISS MMZ G line meet the highest demands: they feature the largest measuring range of all measuring machines offered by ZEISS and offer you unparalleled accuracy.

Technical Specification

- Measuring Volume X/Y/Z from 30/50/12 to 60/100/35 other on NSP request possible
- Accuracy E0 in µm from 2,6+L/400 µm

Shop Floor CMMs
Excellence in production

Quality assurance should be performed at the site of production. This is how manufacturing errors can best be identified and even avoided in the best case scenario. We not only provide the answer to this customer requirement with our MaxLine, but are continuing to enhance it.

ZEISS DuraMax

ZEISS DuraMax is equipped with the VAST XXT scanning sensor from ZEISS, it can even be used to capture contours and freeform surfaces. A rough production environment is no challenge for ZEISS DuraMax – it is also available with the HTG option (High Temperature Gradient). Sustainability is a principle of action for the use of resources.

Technical Specification

- Measuring Volume X/Y/Z 5/5/5
- Accuracy E0 in µm from 2,4+L/300 µm

ZEISS DuraMax HTG

ZEISS DuraMax HTG has the widest temperature range and highest temperature gradient, making it suitable for use in production sites and automation systems with more resistance to environmental influences.

Technical Specification

- Measuring Volume X/Y/Z 5/5/5
- Accuracy E0 in µm 2.2 + L/300

ZEISS PRISMO fortis

ZEISS PRISMO fortis delivers reliable measurements in the toughest conditions, even at temperatures of up to 40°C. For this reason, ZEISS PRISMO fortis can be integrated into production without additional investment in an measuring room.

Technical Specification

- Measuring Volume X/Y/Z from 7/12/7 to 12/18/10
- Accuracy E0 in µm from 0,7 + L/400 (at 22°C) Up to 2,7 + L/80 (at 40°C)

VMMs

When the product designs limits the use of pure tactile metrology, optical and multi-sensoric metrology-systems can offer a solution. With their high point density as well as state-of-the-art sensors, optical metrology can measure soft or fragile materials and probe in locations out of reach for tactile systems, while guaranteeing high measuring accuracy.

ZEISS O-DETECT

Intuitive operation, high-quality camera and flexible lighting for precise measurement in an instant. Suitable for a wide variety of components, but mainly for those that are best left untouched.

Main Applications

- Mainly optical 2D measurements of parts in any color and surface finish. From colored plastics and electronics parts up to reflecting medical parts.

Technical Specification

- Measuring Volume X/Y/Z from 3/2/2 to 5/4/3
- Accuracy E0 in µm from: 1D: 1.6 + L/200, 2D: 1.9 + L/150, 3D: 2.4 + L/150

ZEISS O-INSPECT

The O-INSPECT multisensor measuring machines from ZEISS enable you to optimally measure each characteristic – optically or through contact measurement. The special feature: the ZEISS O-INSPECT delivers reliable 3D accuracy compliant with ISO standards at a temperature range of 18 – 30 °C.

Main Applications

- Workpieces with sensitive surfaces and with real 3D features and tight tolerances where tactile scanning is a benefit.

Technical Specification

- Measuring Volume X/Y/Z from 3/2/2 to 8/6/3
- Accuracy E0 in µm from :1D: 1.4 + L/250 (5/4/3), 2D: 1.6 + L/250, 3D: 1,9 + L/250

ZEISS O-INSPECT duo

ZEISS O-INSPECT duo offers two technologies in one machine: large workpieces such as PCBs, fuel cells or batteries can both be measured and inspected in high resolution in their entirety. The combination of 3D measurement technology and microscopic inspection increases efficiency and saves space in quality laboratories.

Main Applications

- Measurement and inspection of electronic, battery or medical components

Technical Specification

- Measuring Volume X/Y/Z 8/6/3
- Accuracy E0 in µm from :1D: 1,5 + L/250 (8/6/3), 2D: 1.8 + L/250, 3D: 2.2 + L/250

Horizontal arm CMMs

Optimal measurement results through maximum accessibility – this is guaranteed by the use of coordinate measuring machines in column design. This type of CMM is made up of a fixed bridge and an axis for moving the measured object. Due to the very large measuring range, Horizontal Arm measuring machines are mainly used to inspect sheet metal, cast iron or steel parts in vehicle, aircraft and ship building. Because of maximum accessibility, you can measure even large workpieces precisely with a horizontal arm device and avoid measurement deviations.

ZEISS CALENO

ZEISS CALENO is a combination of CMM accuracy, collaborative system and an outstanding multi-sensor system with an automatic tool changer. Maximum versatility and highest performance capabilities ensure highertravel speed, acceleration and accuracy in the measuring room and near production.

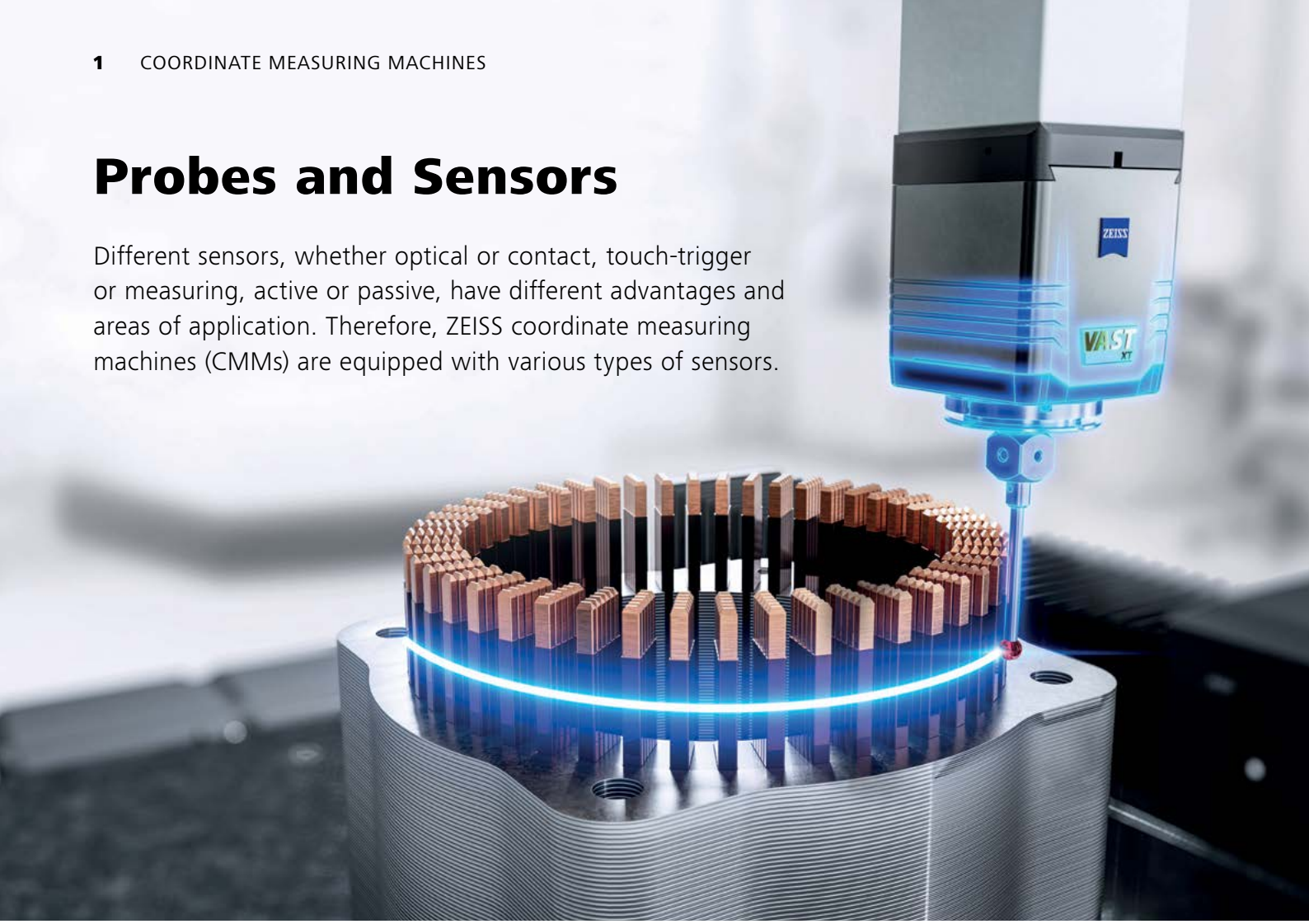
With its combination of high-performance optical and tactile sensors ZEISS CALENO ensures maximum productivity and precision. The Optical system ZEISS EagleEye in ZEISS CALENO enables to reduce the measuring time for up to 85%* with no compromise on quality and accuracy.

Technical Specification

- Measuring Volume X/Y/Z up to 70/18/30 and 70/30/30 (Duplex)
- Accuracy E0 in µm from 27 + L/80 = 70 (at 16 °C – 24 °C)
  18 + L/125 = 50 (at 18 °C – 22 °C)

Probes and Sensors

Different sensors, whether optical or contact, touch-trigger or measuring, active or passive, have different advantages and areas of application. Therefore, ZEISS coordinate measuring machines (CMMs) are equipped with various types of sensors.



Tactile Probes

VAST gold

The active measuring force control enables exact measuring results with complex long stylus systems and a high measuring throughput through navigator technology for optimal scanning performance.

Compatible CMMs

- PRISMO, XENOS, MMZ

VAST XT gold

The ZEISS VAST XT gold sensor is the compact version of the VAST gold active scanning sensor line from ZEISS. It provides the foundation for entry into the world of active scanning technology.

Compatible CMMs

- CONTURA, MICURA, MMZ, PRISMO (only standard)

VAST XTR gold

Thanks to the integrated rotary axis, the ZEISS VAST XTR gold probe always positions the stylus in the direction of the feature being measured, maneuvers effortlessly through gaps and thus gets wherever it is needed.

Compatible ZEISS CMMs with RDS

- CONTURA, MICURA, PRISMO (not for PRISMO ultra), MMZ

VAST XXT

There are a large number of measuring applications that can benefit from the flexibility of an articulating probe holder combined with scanning capability. ZEISS VAST XXT is ideal for such tasks.

Compatible ZEISS CMMs with RDS

- SPECTRUM, CONTURA, PRISMO, MMZ

Compatible ZEISS CMMs (fixed installation)

- SPECTRUM, CONTURA direct, DuraMax, O-INSPECT

XDT

Thanks to a unique combination of technical features, the ZEISS XDT multipoint sensor enables a wide range of applications and delivers high precision in all probing directions.

Compatible ZEISS CMMs with RDS

- CONTURA

Compatible ZEISS CMMs (fixed installation)

- CONTURA direct, DuraMax, O-DETECT

RST-P

This sensor is known for its fast and dynamic capture of measurement data through single-point probing, free from stylus bending and mechanical hysteresis.

Compatible CMMs

- CALENO

Optical Probes

ViScan

Today, the complexity of test specimens is so extensive that contact or optical sensors alone are no longer sufficient. With the ZEISS ViSCAN 2D optical probe, it is now possible to perform contact and optical measuring tasks on a single machine.

Compatible CMMs

- CONTURA, PRISMO, O-INSPECT (fixed installation)

LineScan

The ZEISS LineScan is the tool of choice when capturing the entire surface of forms using point clouds is important – whether for a comparison with available nominal CAD data sets or for the creation of new CAD models.

Compatible CMMs

- CONTURA, PRISMO, MMZ T, MMZ M, MMZ G

LineScan One

ZEISS LineScan One is an optical laser triangulation sensor for capturing huge point clouds to compare nominal with actual geometry.

Compatible CMMs

- CONTURA, SPECTRUM

DotScan

Chromatic white light sensors enable the non-contact capture of workpiece topography. They are generally used when sensitive, reflecting or low-contrast surfaces make the use of other optical sensors more difficult.

Compatible ZEISS CMMs with RDS and opical fiber interface

- CONTURA, PRISMO, O-INSPECT (direct installation)

Roughness Sensor

To ensure the quality inspection of components, such as those in vehicle powertrains, it becomes essential to examine roughness and waviness accurately. This is made possible through the utilization of a roughness sensor. By implementing this sensor, operators can experience a simplified workflow that enhances measuring certainty and leads to significant time savings.

ROTOS

With its modular design and three-axis rotation, ZEISS ROTOS delivers precision and exceptional flexibility for roughness measurements. The ability to easily change stylus arms extends the range of applications, providing maximum versatility.

Compatible CMMs

- PRISMO (no PRISMO ultra)

Integration Series

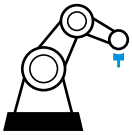
ZEISS not only designs and develops measuring systems for quality assurance, we also give you the confidence of knowing you have a reliable partner at your side. Whether for software solutions, fixtures, loading systems, accessories, reporting or integration into automated production lines, ZEISS is your one-stop shop for getting the most out of your measuring and testing systems.

ZEISS

An interdisciplinary team of ZEISS experts takes individual components to develop a customized, comprehensive solution just for you. Joint project planning and application know-how make it possible to efficiently optimize system loading in the measuring lab or in production.

ZEISS Inspection and Measuring System

The ZEISS PRISMO stands for maximum accuracy, even in a harsh production environment. Around the world, the coordinate measuring machine is seen as synonymous with high-speed scanning and outstanding precision. The combination of optical and contact sensors or the ZEISS ROTOS roughness sensor and a contact sensor further increases the flexibility of the entire multi-sensor system. This makes it possible to effectively capture size, form, position and surface measurements on one machine and all without re-fixturing.



ZEISS Engineering

ZEISS Engineering encompasses process automation, component handling more generally and, as shown here, manual loading systems. The ZEISS rotating set-up station enables you to switch out workpieces that have already been inspected with those that still need to be tested – at exceptional speed. The measuring system itself is not blocked as parts are mounted and dismounted. While the measurement is being performed, the operator has time to unclamp the inspected part, remove it and fixture a new one, significantly increasing workpiece throughput.

ZEISS Software, IT Integration and Programming

As a matter of course, ZEISS FACS enables the integration of routine measuring applications in automated processes, frequent random sampling and 100 % inspection. The simplified user interface allows the operator to start measurement runs at the push of a button. ZEISS CALYPSO operates unnoticed in the background, preventing operator errors. ZEISS PiWeb displays and assesses measurement values using graphical and statistical evaluations.

ZEISS Accessories and Services

The automated probe changing magazine ZEISS ProMax provides your styli systems outside the measuring space of your measuring machine for automated probe changing. This ensures using your measuring volume optimally for your workpiece and the movement path of the measuring head without the risk of collision.

The ZEISS fixtures, clamping systems and pallets guarantee the repeatable fixation of workpieces.

Optical 3D Metrology

Our optical systems consist of industrial non-contact 3D scanners. They deliver highly accurate full-field 3D scans in a minimal amount of time. Due to their splash- and dustproof housing, the systems are well-suited for the usage in challenging environments.

3D Scanning

ZEISS ATOS 5

High-speed 3D scanning

Developed for industrial use, ZEISS ATOS 5 delivers high-precision 3D data in a short measuring time. Especially for shiny and dark surfaces, fine structures and edges the sensor delivers full-field 3D scans, enabling comprehensive process and quality control.

ZEISS ATOS 5X

For car body inspections

Thanks to its powerful light source, ZEISS ATOS 5X enables the inspection of car bodies with maximum speed in automated applications. The integrated Laser Light Compressor generates ultra-bright light, thus enabling very short exposure times.

ZEISS ATOS 5 for Airfoil

Tailor-made for gas turbine industries

ZEISS ATOS 5 for Airfoil delivers precise data in a short time. It's high stability and optimized working distance make it ideal for small measurement areas. The full-field 3D measurement results enable reliable quality control, visualize hidden defects and thus accelerate the production of complex parts.

ZEISS ATOS LRX

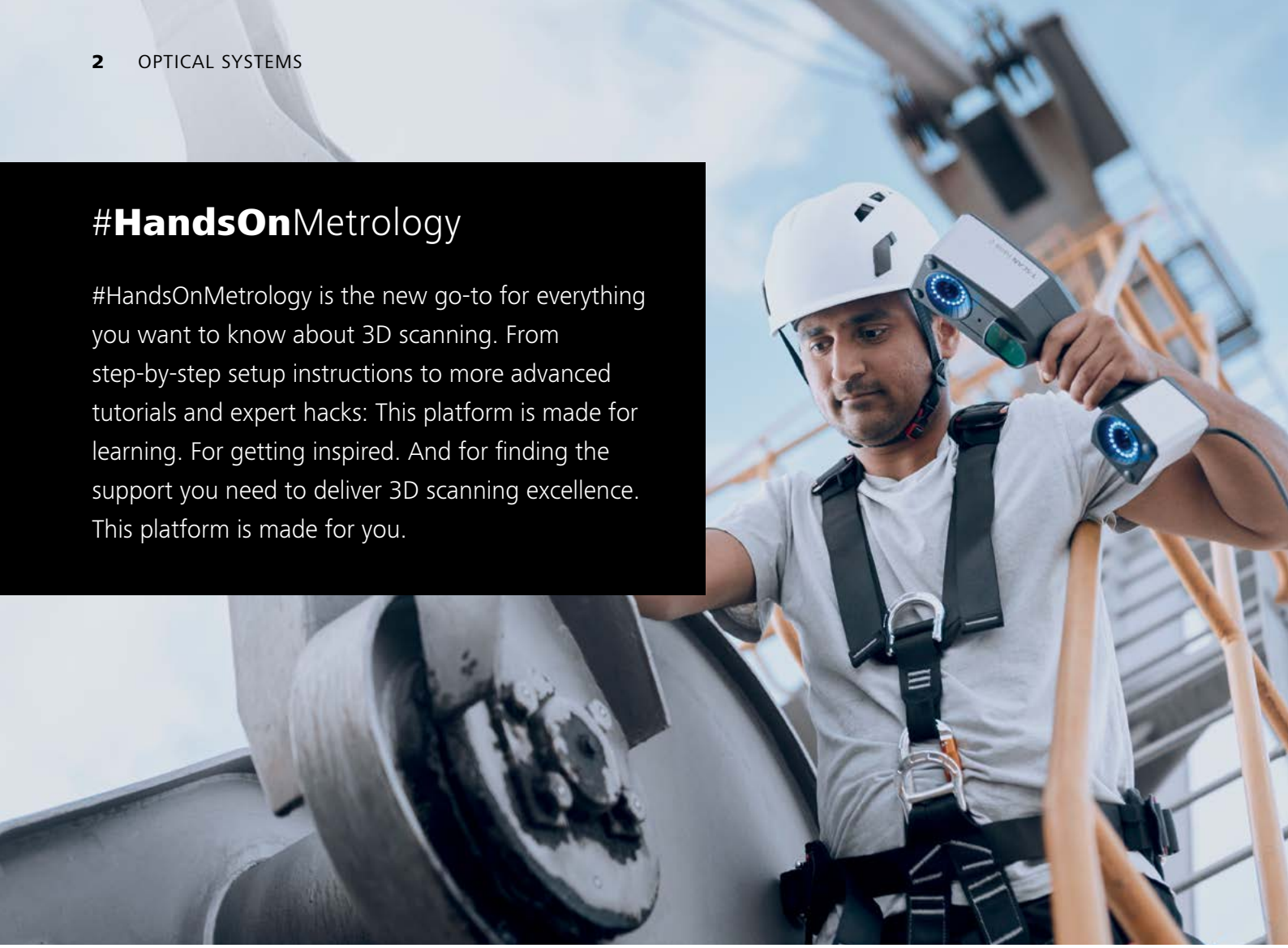
Precise data acquisition for large-volume parts

With a bright laser light source and a large measuring area of up to 4 m², ZEISS ATOS LRX delivers precise, full-field data in short time. The sensor captures up to 2 x 12 million coordinate points with just one scan.

ZEISS ATOS Compact Scan

3D scanner for multiple applications

The portable and lightweight 3D scanner ZEISS ATOS Compact Scan is designed for a wide range of applications. With different measuring volumes the system delivers high-resolution results whether scanning small or large parts.



#**HandsOn**Metrology

#HandsOnMetrology is the new go-to for everything you want to know about 3D scanning. From step-by-step setup instructions to more advanced tutorials and expert hacks: This platform is made for learning. For getting inspired. And for finding the support you need to deliver 3D scanning excellence. This platform is made for you.

#**HandsOn**Metrology

ZEISS ATOS Q

Designed as a flexible 3D scanner for complex measurement and inspection tasks, ATOS Q meets high metrological demands for many industries. The Triple Scan Principle and Blue Light Equalizer enable maximum precision, even on challenging surfaces.

ZEISS GOM Scan 1

The lightweight solution allows you to capture 3D data intuitively. Easy to operate, GOM Scan 1 is the specialist for simple and fast measurements of small to medium-sized parts – even in confined spaces.

ZEISS T-SCAN hawk 2

The hand-held laser scanner captures data wherever you need. With its flexible design it adapts to your unique measuring task. Inspect finest details as well as large objects up to multiple meters. Powerful lasers ensure metrology-grade precision in a seamless workflow.

3D Photogrammetry

ZEISS PONTOS Live

3D measuring system for tracking and probing

Designed for the production environment, the ZEISS PONTOS Live tracking system is used for the live positioning of parts. Equipped with the Touch Probe, the system enables the combination of optical and tactile measurements.

ZEISS TRITOP

Measuring system comes to the measuring object

The digital photogrammetry camera ZEISS TRITOP captures 3D coordinates of individual measuring points on objects and components. The portable system is specially designed for harsh measuring environments directly in production, in a climate chamber or offshore.

3D Testing

The ZEISS 3D testing portfolio includes sensors for dynamic or static acquisition of 3D coordinates, displacements, and surface strains. Using photogrammetric methods like triangulation and bundle block adjustment, the systems deliver precise 3D coordinates for full-field and point-based measurements.

ZEISS ARAMIS 3D Camera

3D sensor for industrial research

ZEISS ARAMIS 3D Camera is a high-resolution optical 3D measuring system for performing full-field and point-based measurements. With high stability, process reliability and ease of use, the system is suitable for high-end applications in industrial environments and offers suitable configurations for a wide range of testing tasks.

ZEISS ARAMIS Adjustable

The modular measuring system for 2D and 3D analyses

Provides precise 2D and 3D coordinates for the analysis of statically or dynamically stressed components and materials. The individually expandable system offers suitable configurations for a wide range of inspection tasks and meets the highest metrological requirements based on digital image correlation.

ZEISS ScanCobot & ScanBox

Automated quality assurance processes play a central role for economic success in the production environment. They ensure that sources of error can be identified at an early stage and necessary corrections can be implemented. ZEISS offers a comprehensive product portfolio for efficient quality control in the production and manufacturing process of small to large components – tailored to individual needs.

ZEISS ScanCobot

ZEISS ScanCobot is a mobile measuring station with a collaborative robot, motorized rotation table and powerful software. The system is especially suited for the efficient quality control of small and medium-sized parts made of plastic, metal or cast iron. It can be used during the pre-production phase, such as design and prototyping, as well as during the market launch.

ZEISS ScanBox Series 4

ZEISS ScanBox Series 4 is an optical 3D measuring machine for the inspection and digitization of small and complex parts up to 500 mm in size. The compact and mobile system is ready for use thanks to the plug & play concept and can be easily repositioned if required.

ZEISS ScanBox Series 4 RC

ZEISS ScanBox Series 4 RC (Remote Control) is an optical measuring machine with a motorized sliding door. With a robot or a customized loading system, parts can automatically be loaded into ZEISS ScanBox Series 4 RC and placed on the rotation table module. The elimination of manual individual placement significantly reduces the time required and therefore ensures a higher throughput in quality assurance.

ZEISS ScanBox 4105 for eMotors

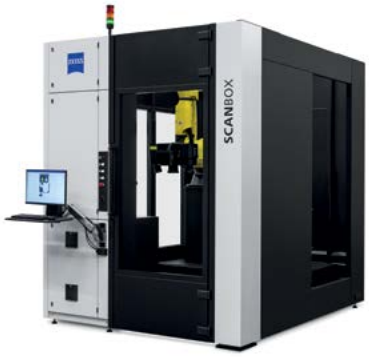
ZEISS ScanBox 4105 for eMotors is specialized in the very fast and precise inspection and digitization of hairpins and stators. Both, complete stators including the hairpins and individual or multiple hairpins can be inspected fully automated within a very short time. The captured 3D measurement data are visualized and analyzed in the powerful inspection software ZEISS INSPECT. This model is also optionally available as RC version.

ZEISS ScanBox Series 5

ZEISS ScanBox Series 5 is an all-in solution for automated inspection and digitization of complex parts. The series consists of three models and offers many options for customizing to indivdual needs. The individual components are identical and therefore offer perfect possibilities for upgrading to different layouts. The maximum load of the rotation table module is 2000 kg.

ZEISS ScanBox Series 5 RC

ZEISS ScanBox Series 5 RC (Remote Control) is an optical measuring machine with a motorized sliding door. With a robot or a customized loading system, parts can automatically be loaded into ZEISS ScanBox Series 5 RC and placed on the rotation table module. As the user does not have to place the individual parts, the time required for quality assurance is significantly shorter than before.



ZEISS ScanBox Series 6

In the production environment, it is important to identify, analyze and eliminate quality problems as fast as possible. For that, as many parts as possible must be completely checked in the shortest amount of time to be able to initiate targeted corrective measures at short notice and to minimize scrap. This challenges can be mastered with ZEISS ScanBox Series 6.

ZEISS ScanBox Series 7

Automated 3D measurement technology for car manufacturing, try-out toolmaking and press shops: ZEISS ScanBox Series 7 you digitizes and inspects large and heavy parts, such as automobile side panels and attached parts of up to 10 meters in size. In addition, welded assemblies for transportation, mechanical engineering and aircraft construction can be measured.

ZEISS ScanBox Series 8

This 3D measuring machine is designed for something big: With ZEISS ScanBox Series 8, complete vehicles are digitized at high speed, both from the outside and the inside. The modular measuring cell has established itself among OEMs as a complete solution for analyses in Meisterbock and Cubing, the inspection of finished vehicles, and for quality assurance in car body manufacturing

Inline Inspection

Due to the fast transformation in the manufacturing world, more and more body shops are asking for fully integrated metrology systems in their lines. The digital transformation of inline metrology reduces the workload on measuring rooms while significantly increasing the number of measured parts. The absolute measuring inline solutions from ZEISS work correlation-free and provide reliable and meaningful measurement data for series monitoring.

ZEISS AIMax cloud II

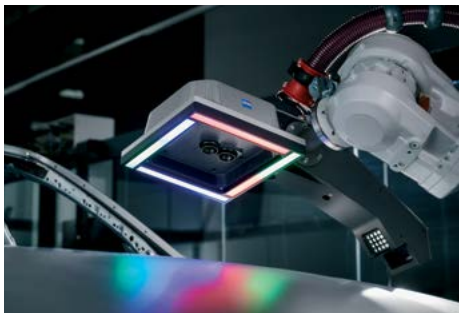
The ZEISS AIMax cloud II sensor generates 3D point clouds directly in the production line and measures highly complex features such as bolts, holes or a weld nut behind sheet metal with just one image. The measurement result is visualized directly after the measurement in the connected ZEISS INDI software. ZEISS AIMax cloud II can also be used in the metrologically traceable inline measuring system ZEISS AICell trace. By using this technology, reliable and meaningful measurement and test data is available with the required accuracy from the very first part.

ZEISS AIMax

The ZEISS AIMax digital optical 3D sensor was specially developed for robot-based inline process monitoring. The system combines three measuring principles that enable the measurement of geometric features such as holes or bolts with maximum robustness and attributive feature recognition.

ZEISS ABIS III

ZEISS ABIS III combines high-speed inspection with a reliable detection of all relevant surface defects such as dents, bulges, sink marks, ripples, neckings, cracks and now also scratches and pressure marks. The system inspects both moving and stationary parts reproducibly and highly precise during live production and within the cycle time. Moreover, it is not only suited for in-line but also for at-line use in the production environment.




ZEISS

ZEISS AIMax twin

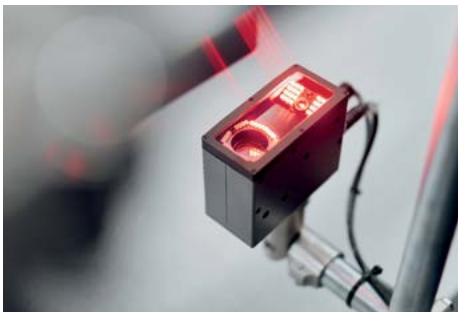
ZEISS AIMax twin can – thanks to the double-head sensor technology – capture and evaluate the gap geometrically from two directions by looking directly into it. The result: an even more precise inspection with more data and information that can be fed back into the process.

ZEISS AIMax twin UV

ZEISS AIMax twin UV enables the reliable inspection of gap and flush on non-cooperative and transparent surfaces such as glass or plastic. The continuous control of all necessary gaps and flush fits – from the overall body to the finished vehicle – guarantees that the parts fit together perfectly.

ZEISS AIMax Inline

ZEISS AIMax Inline is the stationary optical 3D geometry sensor features a wide range of measuring distances and enables solutions for diverse measuring tasks, e.g. quality assurance, location recognition and production-control jobs.



ZEISS AIMax BestFit

ZEISS AIMax BestFit is the optical sensor is suitable for particularly difficult-to-reach areas. It can also be used in stationary fixed sensor cells and directly on the robot. The compact size enables a large number of sensors to be integrated in a small space.

ZEISS 2D X-Ray

The robust and reliable 2D X-ray solutions of the ZEISS BOSELLO product families are specially designed for fast defect detection in tough production environments. With ZEISS BOSELLO, automated or manual non-destructive 2D X-ray inspection as well as high throughput and productivity are guaranteed – thanks to quick loading and unloading, fast cycle times and flexible applications directly inline or near production.

ZEISS BOSELLO MAX

ZEISS BOSELLO MAX is the customizable 2D X-ray solution for your defect detection needs in the production environment. Our proprietary image processing algorithms and the Computed Tomography enhancement allow the detection and complete analysis of various castings. The reliable 2D X-ray technology ensures sharp results and quality control for a large range of workpieces – even in the toughest conditions.

ZEISS BOSELLO OMNIA

With its robust design and customizable setup, ZEISS BOSELLO OMNIA is the ideal 2D X-ray system for harsh production environments. The Automatic Defect Recognition software in combination with automated 100% in-line inspection guarantees fast and reliable defect detection for your quality assurance. Moreover, multi-shift operation and a clever pallet loading system for parallel changing and loading ensure high throughput for the inspection of various types of castings.

ZEISS BOSELLO HEX

ZEISS BOSELLO HEX enables fast inspections of small to mid-sized castings in a very small place – for everyone. With this system you can flexibly configure your optimum 2D X-ray solution that fits your needs and your budget! The unique image processing algorithms of our software guarantee best 2D image quality.

ZEISS BOSELLO WRE thunder

Enabling rapid inspection of light alloy wheels within the production cycle, ZEISS BOSELLO WRE thunder is a high-speed, in-line system designed for 2D X-ray defect detection. The system ensures a reliable inspection of all produced wheels, accurately identifying and evaluating critical defects in accordance with specified requirements.

ZEISS 3D X-Ray

The industrial computed tomography systems from ZEISS enable you to perform advanced measurement and inspection tasks for a huge variety of applications. Whether plastic, metal, or multi-material, 3D X-ray systems inspect your parts quickly and reliably. They give you perfect insight and provide non-destructive testing of both, the external and internal structures.

ZEISS METROTOM 6 scout

ZEISS METROTOM 6 scout digitizes complex parts, including internal geometries, at an exceptional level of detail. The result is a complete 3D volume for GD&T analysis, nominal-actual comparisons or defect analyses. The CT metrology system is an excellent choice for digitizing small plastic parts.

ZEISS METROTOM 800 130 KV

ZEISS METROTOM 800 130kV is equipped with components to achieve highest possible accuracies. This makes it the perfect choice for advanced metrology applications, like in depth dimensional inspections with strict tolerances, on small to medium sized plastic components. By scanning multiple small components at once, the system can furthermore achieve considerable throughputs. The system excels with low maintenance effort, keeping the cost of operation to a minimum.

ZEISS METROTOM 1500

With ZEISS METROTOM 1500, you get advanced and flexible CT technology – reliably detecting flaws by capturing and measuring defects beneath the surface. It delivers fast and high-resolution images for both small and large parts – and everything in between. The hardware module ZEISS scatterControl ensures unchallenged image quality and makes it an ideal system for inspecting multi-material parts.

ZEISS METROTOM 1

Powered with computed tomography technology, you can scan non-destructively and look inside your part. Measure, analyze and inspect hidden defects and inner structures of a wide range of plastic parts. With ZEISS METROTOM 1 you can also easily decrease your scan time by capturing data of multiple parts at once.

ZEISS METROTOM 800 225 KV

ZEISS METROTOM 800 225kV is appreciated for its flexibility. From small plastic or metal parts up to medium sized mixed material parts like connectors, the system can handle it all. The same flexibility is also available in terms of applications: dimensional inspections, defect analysis and assembly control - just to call out some of them.

ZEISS VoluMax 9 titan

ZEISS VoluMax 9 titan combines powerful technology with maximum ease of use. Equipped with a X-ray tube capable to generate up to 450 kV and 1500 W, the CT system offers remarkable penetration strength. It reliably detects defects in high-density parts and complex multi-material assemblies.


ZEISS
FWD 30mm

ZEISS Stereo and Zoom Microscopes

The closer you look, the more you see. ZEISS stereo and zoom microscopes are easy to operate, even for inexperienced users, providing you with information on color, morphology, structure, texture and dimensions. Whether in production environments or in the quality lab, fast imaging helps you to make informed decisions and keep quality at the highest level.

ZEISS Axio Zoom.V16

Reduce image acquisition times to speed up analysis

ZEISS Axio Zoom.V16 is the high resolution, apochromatically corrected on-axis zoom microscope from ZEISS. With a magnification range of 16:1, you can zoom from a large overview (33 mm) down to the smallest detail (0.7 µm). This is particularly beneficial for automated stitching of large tile images and makes ZEISS Axio Zoom.V16 the preferred solution for particle analysis, technical cleanliness and high resolution applications.

ZEISS SteREO Discovery

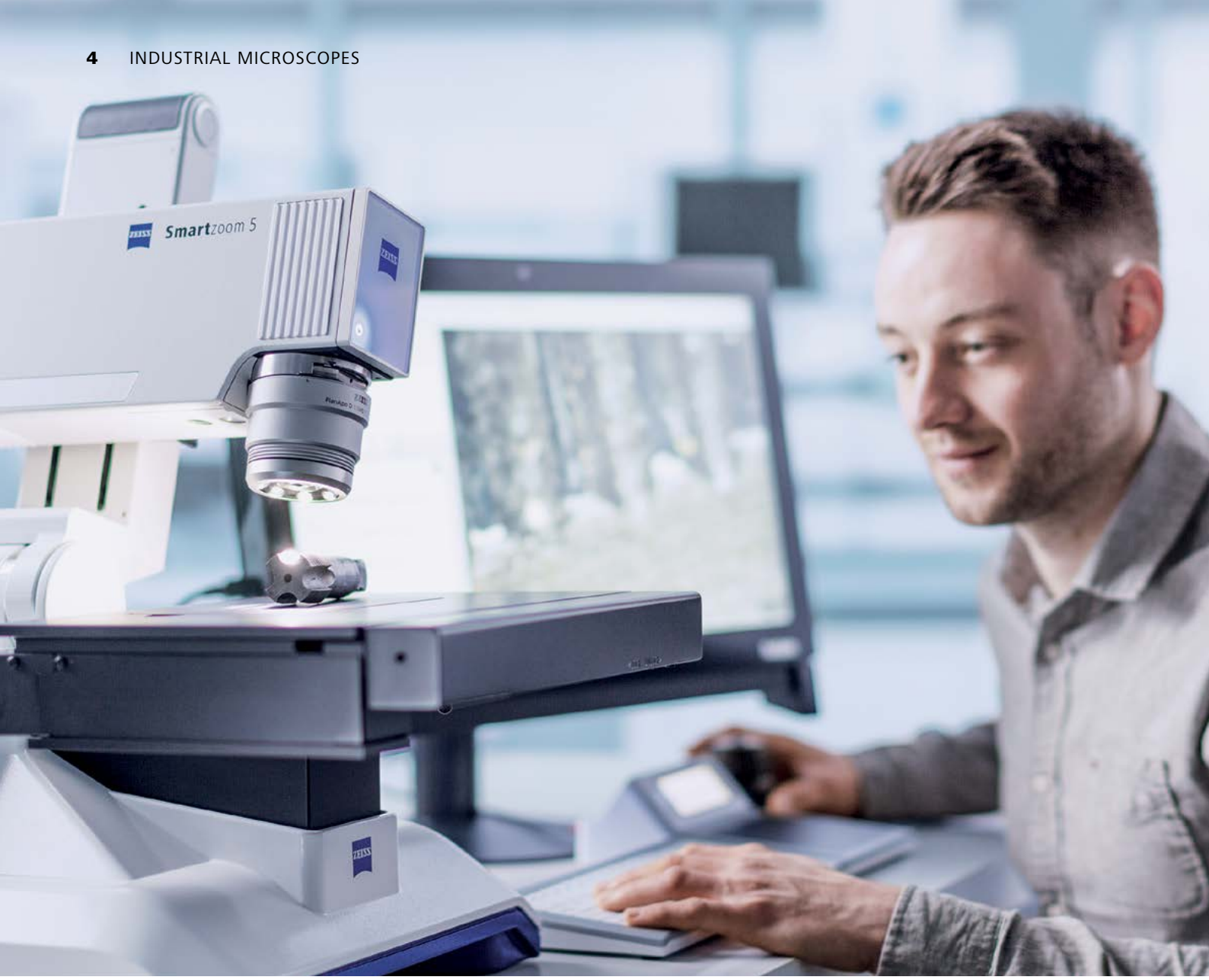
Go from largest overview into the smallest details

Inspect large components like PCBs with exceptional depth perception across the entire 20:1 zoom range. The motorized zoom with an electronically-generated zoom curve lets you take precise control of freely-selectable magnification positions, giving you the advantage of reproducing your image scale with an high accuracy.

ZEISS Stemi 508

High-contrast optical inspection with integrated documentation

ZEISS Stemi 508 is your robust multi-purpose inspection tool for daily work in quality control. It lets you observe and document your components with outstanding image contrast and color fidelity. Various stand and illumination options help you to create an inspection environment that supports inspection efficiency and the ergonomic needs.


Smartzoom 5

ZEISS Digital Microscopes

Go digital to become smarter, faster and have confidence in your data. Simplify and speed up imaging and documentation tasks as well as improving throughput.

ZEISS Smartzoom 5

Repeatable inspection and documentation workflows

ZEISS Smartzoom 5 digital microscope assists operators with consistent execution of recurring, routine imaging and measurement tasks with guided, easy to set up, automated workflows. Intuitive GUI and controls make topography and large area imaging easy.

ZEISS Visioner 1

Enabling real-time all-in-focus visualization for shop floor quality control and quality assurance

Classic inspections systems offer shallow depth of field. ZEISS Visioner 1 revolutionizes the world of optical inspection and documentation. Driven by the unique Micro-mirror Array Lens System (MALS™ technology), enables for the first time, up to 100x more depth of field than traditional inspection microscopes.

ZEISS Laser Scanning Microscope

ZEISS confocal systems offer sub-micron resolution for the most demanding of non contact surface measurement tasks, such as roughness or topography analyses of sensitive materials.

ZEISS LSM 900 for Materials

Laser scanning microscope (LSM) for advanced imaging and surface topography

ZEISS LSM 900 for Materials is the one instrument you will need for materials research and analysis to characterize 3D microstructures and surfaces. When you upgrade your ZEISS Axio Imager 2 upright light microscope or ZEISS Axio Observer 7 inverted microscope with ZEISS LSM 900 for Materials, you will be combining all essential light microscopy contrasting methods for materials with high precision topography – on a single instrument.

ZEISS Wide Field Microscopes

ZEISS is known for their expertise in developing light microscopes with outstanding optical performance for materials investigation. Each microscope holds a distinct place in the comprehensive portfolio for material and failure analysis, covering applications from routine metallography to advanced material examination.

ZEISS Axio Observer

Inverted microscope dedicated to metallography

Take advantage of the inverted microscope design to efficiently investigate multiple samples, or components that would ordinarily be restricted when it comes to microscopic analysis due to size. There's no need to refocus, even when changing magnification or switching samples. ZEISS Axio Observer combines the proven quality of ZEISS optics with automated components to give you reliable, reproducible results.

ZEISS Axiovert

Inverted microscope for the materials lab and smart documentation

Produce high quality images of large and heavy samples effortlessly with ZEISS Axiovert. Let the system take care of selecting the settings. You don't even need a PC to view and document images – just connect with a monitor and save directly to a USB device. The motorized Z-focus and motorized XY stage make Axiovert 7 your candidate for even more workflow automation and advanced imaging.

ZEISS Axio Imager

Be open for advanced materials research

ZEISS Axio Imager 2 is your system platform tailored to demanding materials analysis tasks, development of new materials as well as routine quality control and particle analysis. Obtain reproducible results and high productivity by automating your workflows, with up to 7500x magnification* for the most challenging analysis requirements. ZEISS Axio Imager 2 offers a high degree of adaptability in line with your future requirements as well as being central to a multi modal workflow.

*on screen magnification based on a 26" monitor and specific camera / objective configuration

ZEISS Axioscope

Ready to serve both research and routine

Choose ZEISS Axioscope if your inspection tasks place high demands on usability, reproducibility and automation – and you also need advanced options for research-grade materials analysis. ZEISS Axioscope 7, the motorized model in the product family, enables you to automate much of your work process and opens many opportunities for advanced imaging. Benefit from higher productivity, repeatable processes based on predefined parameters and better comparability of results.

ZEISS Axiolab

Combine metallography with smart documentation

ZEISS Axiolab 5 is the right choice if your routine metallography applications place high demands on ergonomic operation and efficient digital documentation. Since the Smart Microscopy concept does not require additional imaging software or even a computer, ZEISS Axiolab 5 is also the first choice from an economic point of view.

ZEISS Scanning Electron Microscopes

ZEISS scanning electron microscopes (SEM) take over when you've reached the resolution or contrast limit of light microscopy, but further insights still required. Industrial quality control, failure analysis, or research environment especially benefit from its high-resolution imaging and material analytics capabilities.

ZEISS EVO

Best qualified SEM (scanning electron microscope) to support industrial quality and failure analysis

ZEISS EVO offers an operational concept that appeals not only to experienced users, but also to engineers who are not SEM experts. It delivers high-quality data, especially for non-conductive parts and challenging material samples. In combination with the standards-compliant SEM particle analysis solution ZEISS SmartPI, EVO allows particle classification based on their size, shape and elemental composition.

ZEISS Sigma

Field emission SEM technology with an excellent user experience

ZEISS Sigma 360 delivers excellence in price and performance while Sigma 560's best-in-class EDS geometry delivers superb analytical performance. Extract topography, composition and crystallographic information to characterize all your samples. Choose from a variety of detector options to tailor ZEISS Sigma precisely to your applications: you can image particles, surfaces, nanostructures, thin films, coatings and layers.

ZEISS GeminiSEM

Field emission SEM for the highest demands in imaging and analytics

ZEISS GeminiSEM stands for effortless imaging with sub-nanometer resolution and high detection efficiency. Analyze failures in semiconductor materials, examine the microstructure of high-performance steel, characterize polymers, understand the aging process of batteries – ZEISS GeminiSEM will support the most challenging applications, especially when you have to characterize materials which require low voltages.

ZEISS Crossbeam

FIB-SEM for high throughput 3D analysis and sample preparation

Combine imaging and analytical performance of a field emission scanning electron microscope with the processing ability of a focused ion beam (FIB). Prepare high quality samples, like TEM lamellae, using the FIB's low voltage performance, and characterize your samples comprehensively in 3D. Benefit from up to 40 % faster material removal by the introduction of intelligent FIB milling strategies or enable fastest material removal rates with a fs-laser. Enjoy best 3D resolution and leading isotropic voxel size in FIB-SEM tomography.

ZEISS X-ray Microscopy

Characterize the properties and behaviors of your materials non-destructively. Reveal details of microstructures three-dimensional and visualize structural details. Achieve high contrast and submicron resolution imaging even for relatively large samples.

ZEISS XRM Versa

Discover more with non-destructive 3D X-ray imaging at submicron resolution

ZEISS Versa 3D X-ray microscopes (XRM) provide superior 3D image quality and data for a wide range of materials and working environments. The system features dual-stage magnification based on synchrotron-caliber optics and revolutionary RaaD™ (Resolution at a Distance) technology for high resolution even at large working distances. Non-destructive imaging preserves and extends the use of your valuable sample, enabling 4D and in situ studies. Unique Advanced Reconstruction Toolbox (ART) further enhances results and usability with market leading AI based image quality and throughput improvements.

ZEISS XRM Context

Most advanced microCT platform in the industry

ZEISS XRM Context® micro-computed tomography (microCT) is an easy-to-use system for analysis of all types of samples. A high-array detector enables high resolution of fine details even with relatively large imaging volumes. The system features a large field of view, rapid sample mounting and alignment, streamlined acquisition workflow and fast exposure and data reconstruction times.

ZEISS XRM Ultra

Nanoscale X-ray imaging: explore at the speed of science

Synchrotron X-ray nanotomography enables non-destructive 3D imaging at the nanoscale but you have to apply for very limited beamtime. Imagine if you had synchrotron capabilities in your own lab. With the ZEISS XRM Ultra you have 3D non-destructive X-ray microscopes at hand that deliver nano-scaled resolution with synchrotron-like quality.

ZEISS XRM CrystalCT

The first commercial microCT crystallographic imaging system

ZEISS XRM CrystalCT® computed tomography platform uniquely augments this powerful imaging technique with the ability to reveal crystallographic grain microstructures, transforming the way polycrystalline materials (such as metals, additive manufacturing, ceramics and others) can be studied, leading to newer and deeper insights for your materials research.

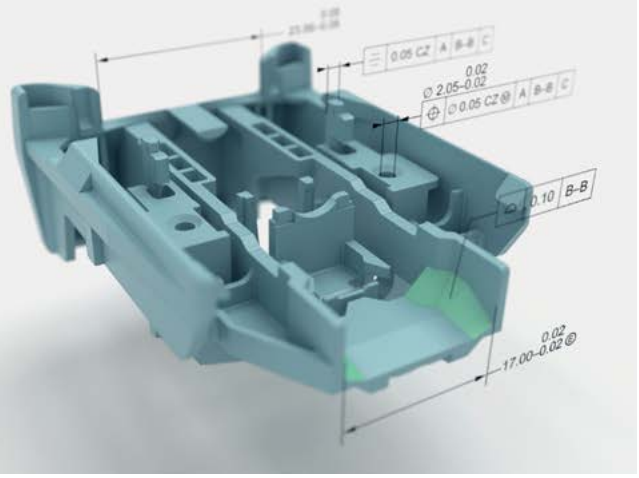
Metrology and Inspection Software

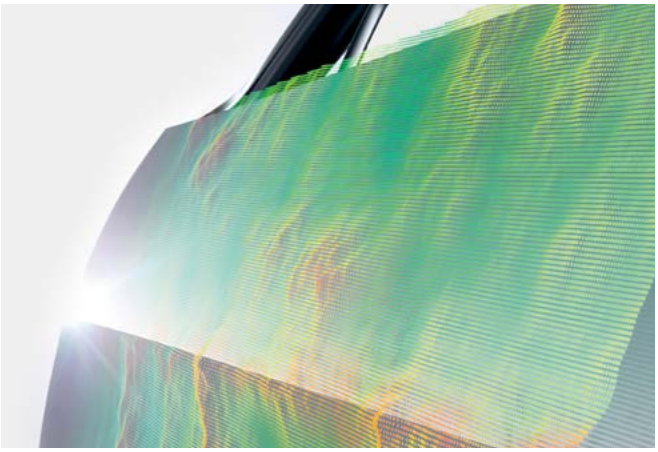
High quality in the production process is quite simple with the right tools. With ZEISS Quality Software, you can analyze your components precisely and intuitively.

ZEISS CALYPSO

The direct path to meaningful results

Your software for coordinate measuring machines: ZEISS CALYPSO measures geometrical elements simply, quickly and reliably. Just click the desired features to configure inspection plans. Adjust the software to your demands: Due to numerous optional add-ons, the software also offers the right tools for special requirements.





ZEISS CALIGO

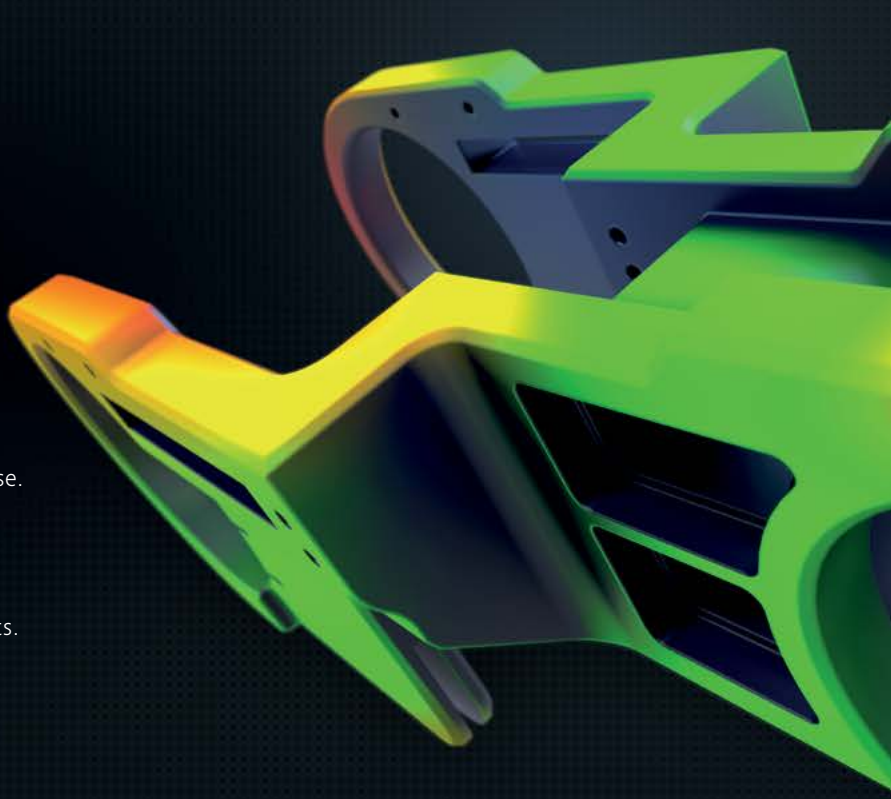
Specialist for freeform surfaces

With its focus on freeform surfaces, ZEISS CALIGO is primarily aimed at users in car body construction. Measure and evaluate freeform surfaces and ruled geometries. The software supports measurements with horizontal arm devices and duplex systems.

ZEISS GEAR PRO

Gear metrology on the CMM

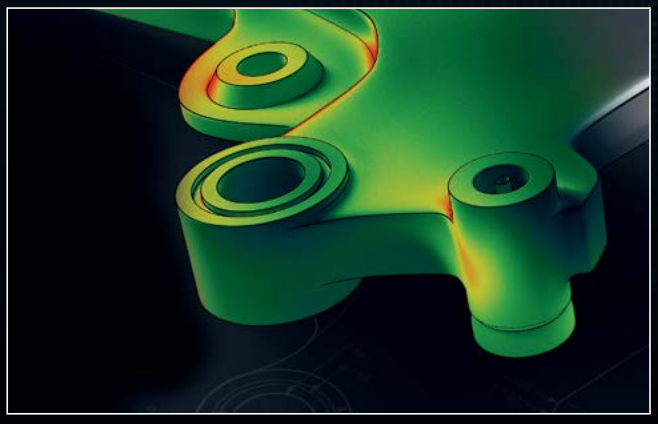
GEAR PRO enhances your coordinate measuring machines for gear measurement and detailed analysis of gears. GEAR PRO's analytical 3D gear model and graphics-supported input dialogs make measuring and evaluating data highly effective.



ZEISS INSPECT

One Metrology Software.
Intuitive. Customizable. Automated.

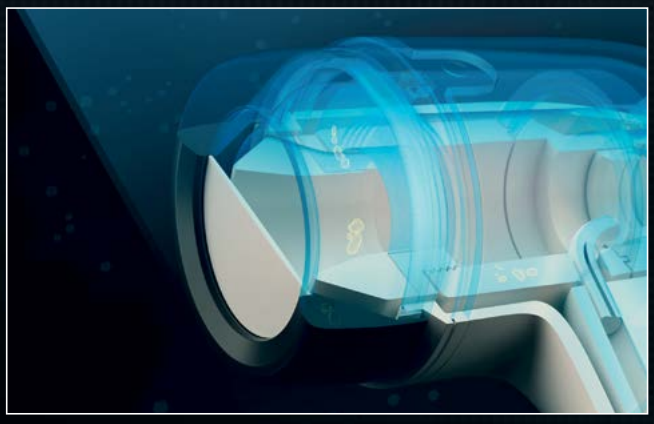
Discover the versatility of ZEISS INSPECT. With one intuitive software, you analyze optical 3D data and volume data – regardless of which system you use. Numerous powerful features allow you to customize the software according to your needs. Enhance your productivity through automation. Many user-friendly features ensure efficient workflows and precise results.



ZEISS INSPECT Optical 3D

The standard for your 3D surface inspection

From full-field data acquisition and mesh processing to trend analyses and digital assembly, the software supports you with a consistent workflow. Experience automated programming and inspection made easy.



ZEISS INSPECT X-Ray

Powerful metrology for your x-ray inspection

Visualize and analyze your parts down to the core using CT data. Easily evaluate multiple parts and assemblies automatically. Increase your efficiency with AI-based tools for defect detection.

Apps for ZEISS INSPECT

Optimal customization of the software to your needs

Get even more out of ZEISS INSPECT. Our powerful apps make it easy to integrate individual requirements. Create your own project templates and automatic measurement sequences or use AI-based defect detection.

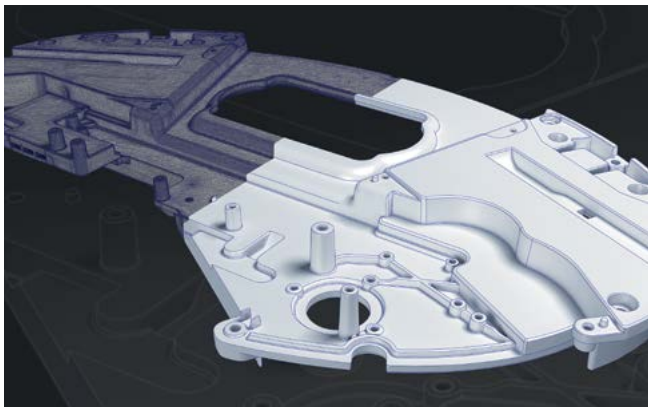
ZEISS Quality Suite

Your ecosystem for measurement technology and quality assurance

The ZEISS Quality Suite* is much more than just the sum of its individual software applications. It is your central point of contact for everything related to measurement technology and quality assurance in your company.

- **Greater efficiency**
- **Error prevention**
- **Optimized networking and communication**

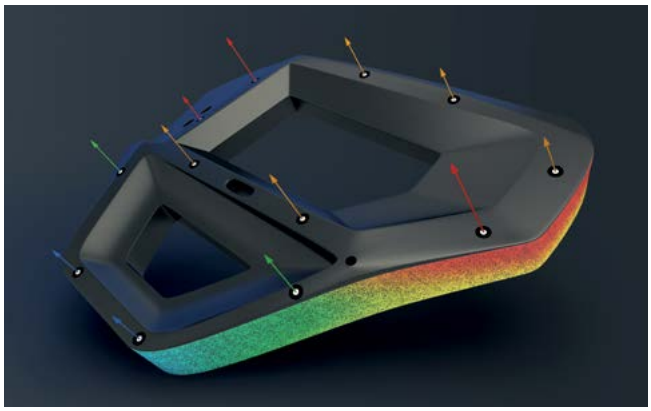
*ZEISS Quality Suite only runs on Microsoft Windows.



ZEISS REVERSE ENGINEERING

Surface reconstruction and tool correction

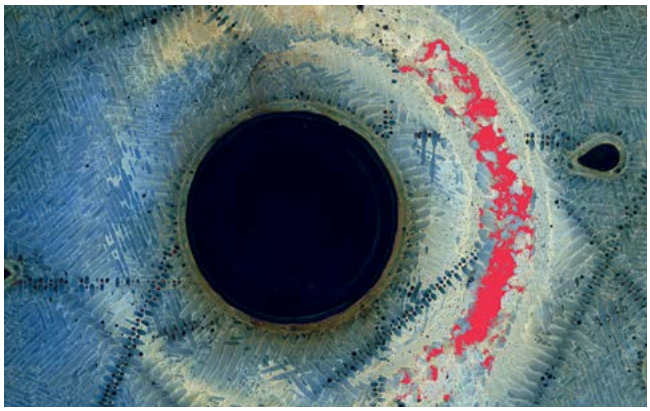
From 3D scan to CAD model: ZEISS REVERSE ENGINEERING offers you a simple software solution for reverse engineering. In just a few guided steps, a highly accurate CAD model is created. With the additional tool correction option, you save iteration loops in the correction process.



ZEISS CORRELATE

Analyze motions, displacements and strains three-dimensionally

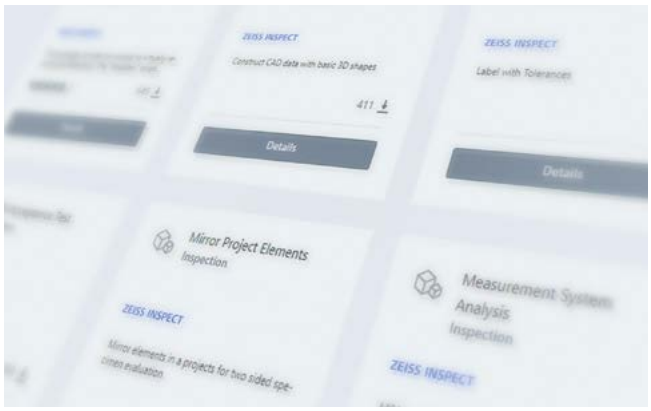
Turn videos into meaningful measurement data. Analyze dynamic processes such as displacements, rotations or angle changes. Use digital image correlation and point tracking algorithms to measure 3D coordinates with sub-pixel accuracy.



ZEISS ZEN core

Image analysis for industrial microscopy

The AI-based software for complex image processing combines imaging, segmentation, analysis and data connectivity and enables automated image analysis of microscopic images.



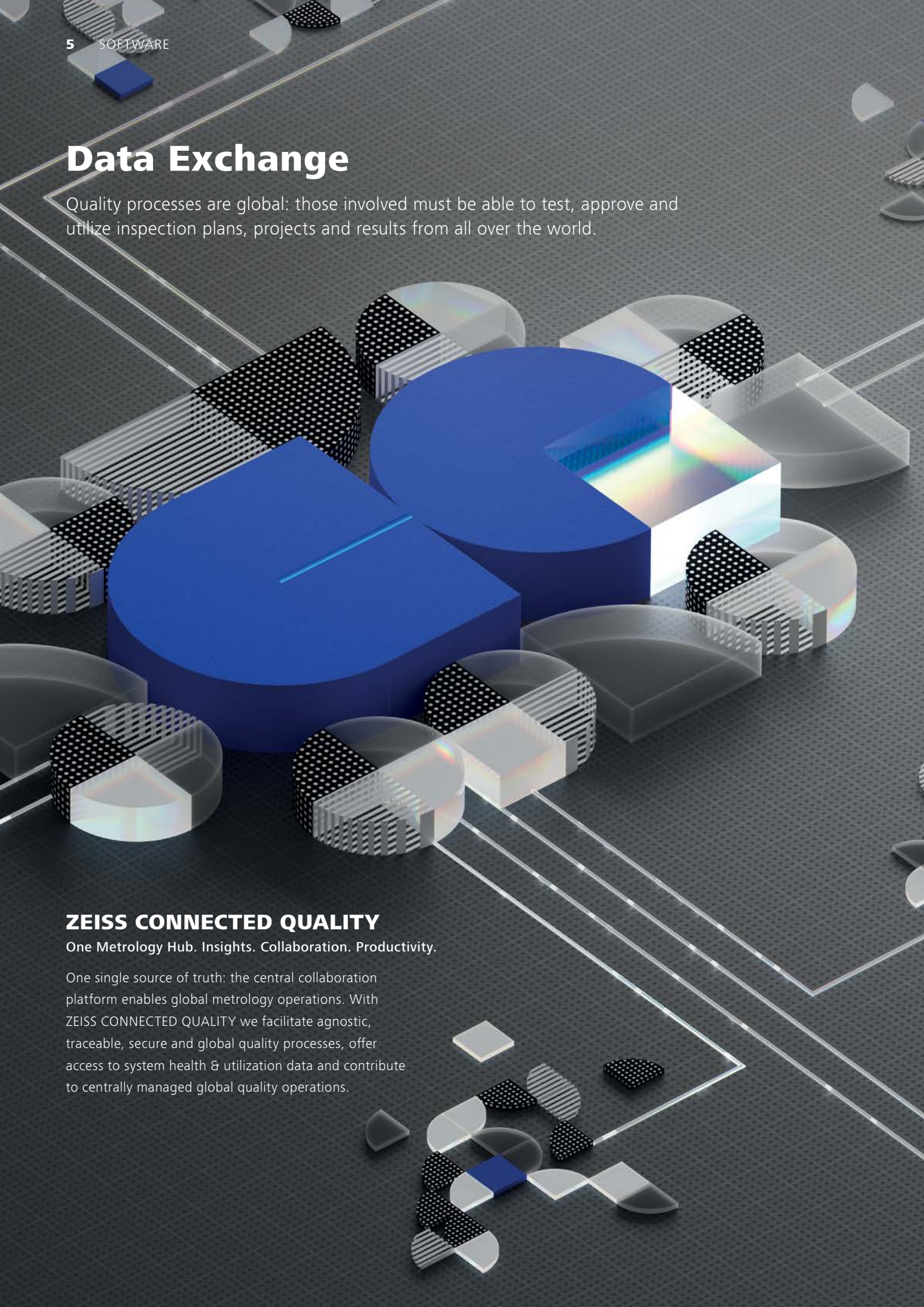
ZEISS Quality Software Store

Book apps and products in the ZEISS Quality Software Store. Easily get access to the trial and free version of our software. Do you need more functions? Expand your software with optional apps.

software-store.zeiss.com

Data Exchange

Quality processes are global: those involved must be able to test, approve and utilize inspection plans, projects and results from all over the world.



ZEISS CONNECTED QUALITY

One Metrology Hub. Insights. Collaboration. Productivity.

One single source of truth: the central collaboration platform enables global metrology operations. With ZEISS CONNECTED QUALITY we facilitate agnostic, traceable, secure and global quality processes, offer access to system health & utilization data and contribute to centrally managed global quality operations.

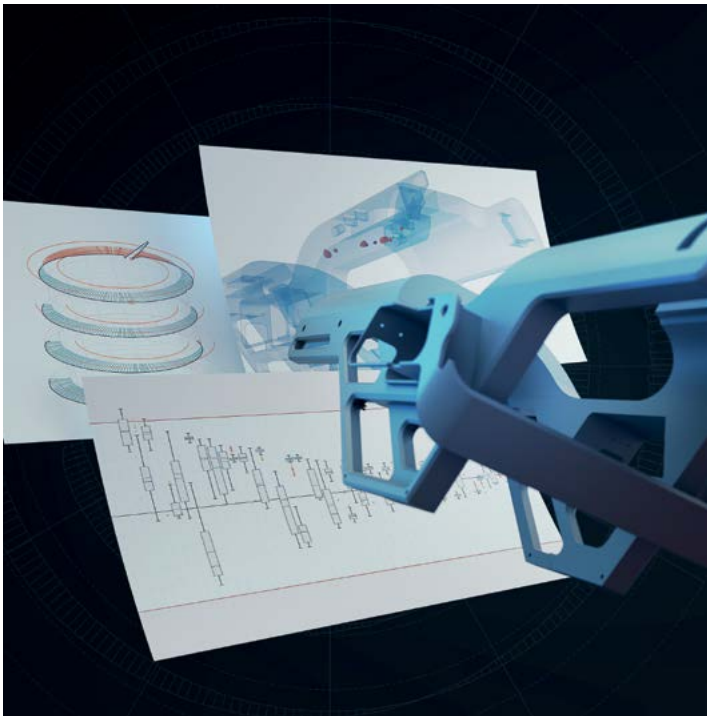
Data Management

Industrial metrology is essential to deliver reliable product quality to the customer. Create data evaluations, analyses and reports across technologies and systems.

ZEISS PiWeb

Transform quality data into meaningful results

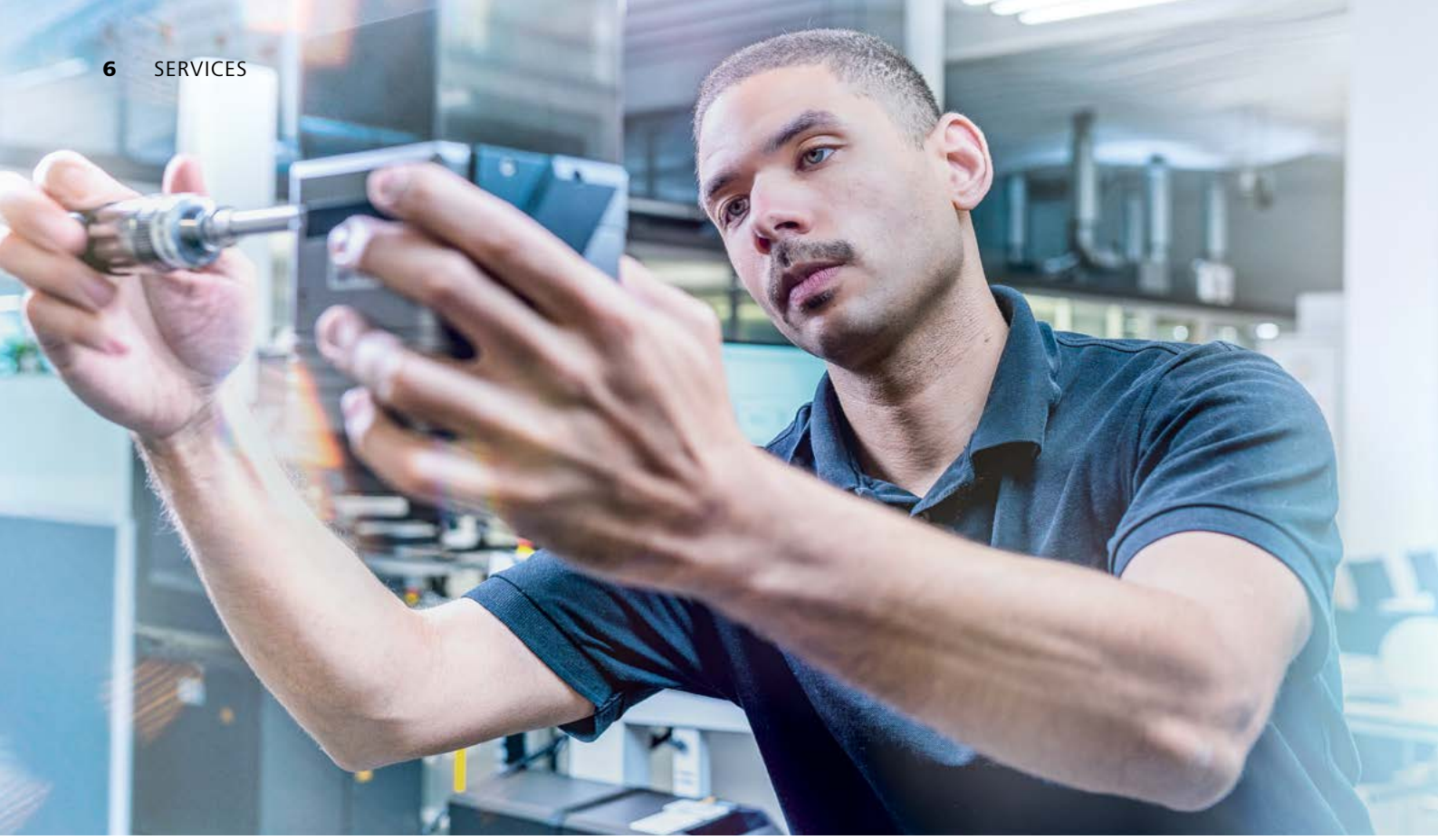
ZEISS PiWeb reporting and quality data management software helps to connect metrology results coming from different measuring technologies to shop floor decisions. This allows you to efficiently track your production quality across all measuring machines. The software can capture and analyze results from tactile, optical, manual or CT measurements.



ZEISS Smart Services Dashboard

Transform machine data into uptime

With the ZEISS Smart Services Dashboard you keep track of the performance of your ZEISS measuring machines. Benefit from greater machine availability, process safety and higher productivity. This allows you to unlock the full potential of your measuring solutions.



ZEISS – Services and Support

As a comprehensive solutions provider, ZEISS remains at your side independent of the purchase of a measuring system. From measuring services and training ' to enhanced application support – only ZEISS Industrial Quality Solutions is able to offer you the right expertise at all stages of the product life cycle.

We offer customized service packages, tailored to the needs of aour customers and serve our customers through a highly skilled, global network of technicians. Equipped with enhanced digital tools and technologies, we are able to help our customers maximize their machine uptime, increase equipment utilization efficiencies and thereby resulting in better customer satisfaction.

ZEISS QEC

Local Customer Center
Measurement Services
Quality Excellence Center
63 QECs in 38 Countries

Knowledge

Training & Learning
AUKOM
ZEISS Academy
100+ Courses
38 Countries

Maintenance & Repair

Service Contracts
Software Maintenance
Calibration Service
Customized HW/SW SMA
120K+ iBase
1200+ FSEs

Retrofit & Productivity

Modernize Systems
Accessories
Monitor & Analyse
ZEISS Metrology Shop
B2B / Online
15K+ Products

QUALITY EXCELLENCE CENTER

Measuring services in your area

Experience our broad portfolio of measuring services in our more than 60 locations worldwide. We offer a solution for your toughest measuring challenge so that you can focus on your core business.

KNOWLEDGE

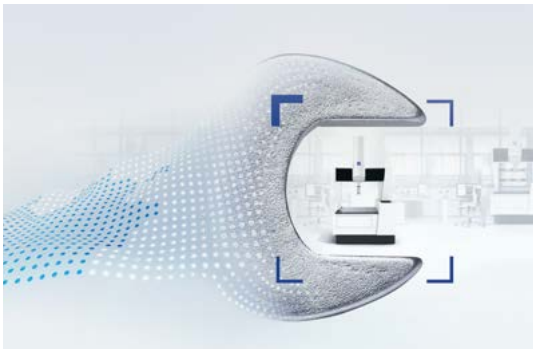
I am the solution.

The ZEISS ACADEMY METROLOGY offers online and classroom training tailored to your needs. Receive the most up-to-date knowledge and become an indispensable asset in your company: become the solution.

MAINTENANCE & REPAIR

Customised Service Packages to Ensure Maximum Performance

Customized ZEISS Metrology Care packages, Software Maintenance Agreements and on-site Calibration services to unlock maximum performance, help avoid machine downtime and ensure trustworthy measurement results everytime. Real time monitoring, analysis and central overview with digital solutions.



RETROFIT & PRODUCTIVITY

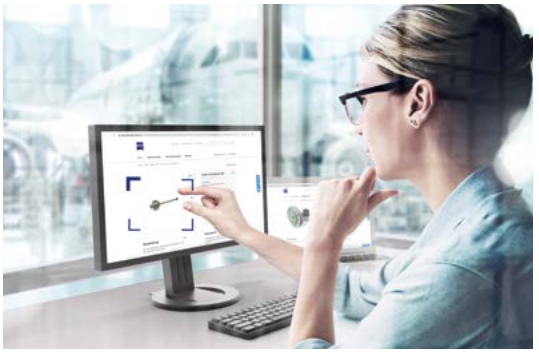
Performance Upgrade, Accessories and Digital Solutions

Upgrade your old machine to latest hardware and software standards for higher performance, more functionality at a fraction of cost of a new machine. ZEISS accessories solution for optimal precision and accuracy. Real time monitoring, analysis and central overview with digital solutions.

METROLOGY PORTAL

One link. One login. One stop.

From software download, to the webshop to the ZEISS community – our online portal offers digital services that simplify your daily life in quality assurance.



Seeing beyond

Carl Zeiss
IQS Deutschland GmbH
73447 Oberkochen, Germany
Phone: +49 7364 20-6337
info.metrology.de@zeiss.com
www.zeiss.de/imt

Carl Zeiss
Industrial Quality Solutions LLC
6250 Sycamore Lane North
Maple Grove, MN 55369/USA
Phone: +1 763 744-2400
info.metrology.us@zeiss.com
www.zeiss.com/metrology

zeiss.ly/zk7z

EN_60_025_0044II Printed in Germany