



ZEISS PRISMO family

When Precision Matters the Most



Seeing beyond

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ZEISS PRISMO

Precision in every environment

As one of the most precise CMMs on the market, ZEISS PRISMO reliably and reproducibly achieves maximum accuracy. Boasting the fastest measuring speeds of any ZEISS CMM, it is ready for deployment in a range of different environments – with the ZEISS PRISMO fortis handling even the toughest conditions in inline settings at temperatures of up to 40°C.

The new generation of the PRISMO family

The ZEISS PRISMO portfolio comprises a quartet of machines that are fully compatible with requirements and boost efficiency through quality and accuracy. They represent the ideal solution for customers who cannot accept any compromise on precision in the context of quality control. With ZEISS PRISMO, accuracy plus safety equals productivity.

ZEISS has voluntarily committed to applying the German Social Accident Insurance (DGUV) standards as a recognized benchmark for ZEISS PRISMO. It has also introduced a raft of new features and enhancements to further increase flexibility as well as economic and ecological performance, ensuring that this premium CMM will deliver long into the future. Read on to discover all that the new ZEISS PRISMO family has to offer.

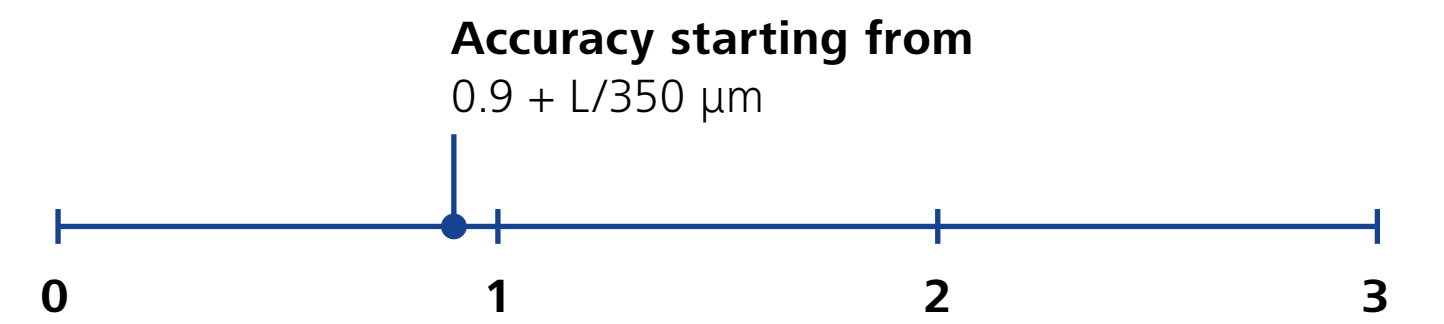


Enter a new era with **ZEISS PRISMO**

A trusted name. All-new features.

More than just a facelift: This flagship family of CMMs from ZEISS has undergone a thorough overhaul. Numerous upgrades combine to boost safety, economic and ecological performance, flexibility, ergonomics, and of course productivity.

All this while reducing the noise level by 34%. From an energy-saving controller and a redesigned control panel to automated safety mechanisms and improved sensor compatibility, the new ZEISS PRISMO family does more than ever before.



ZEISS PRISMO

The all-rounder

Best results guaranteed

Computer-Aided Accuracy (CAA) corrects all dynamic influences on the machine in order to optimize precision for high-speed scanning. It promotes economic efficiency with faster calibration and longer operating times.

Highest productivity guaranteed

The ZEISS VAST performance package ensures maximum productivity by shortening the travel path. FlyScan reduces measuring time by as much as 70 %, while QuickChange performs automatic stylus changes up to 60 % faster.

Maximum application flexibility

ZEISS PRISMO is equipped with the ZEISS multi application sensor system (ZEISS mass technology) as standard. Thanks to the new C99m controller from ZEISS and new cabling, the roughness sensor ZEISS ROTOS and the optical sensor ZEISS LineScan can now be used on the same machine.

Time and cost savings

In addition to reducing the number of stylus configurations and system changes, the ZEISS Articulating Stylus measures in all orientations with styli up to 200 mm long. Every angle position between $+135^\circ$ and -135° is freely selectable after calibration.

ZEISS PRISMO verity

The new standard

Best-in-class accuracy

Improved form measurement values mean ZEISS PRISMO verity is the best machine in its class. Guaranteed to provide the highest precision, it combines with ZEISS VAST navigator technology to automatically configure the maximum measuring speed.

Suitable for class 3 measuring rooms

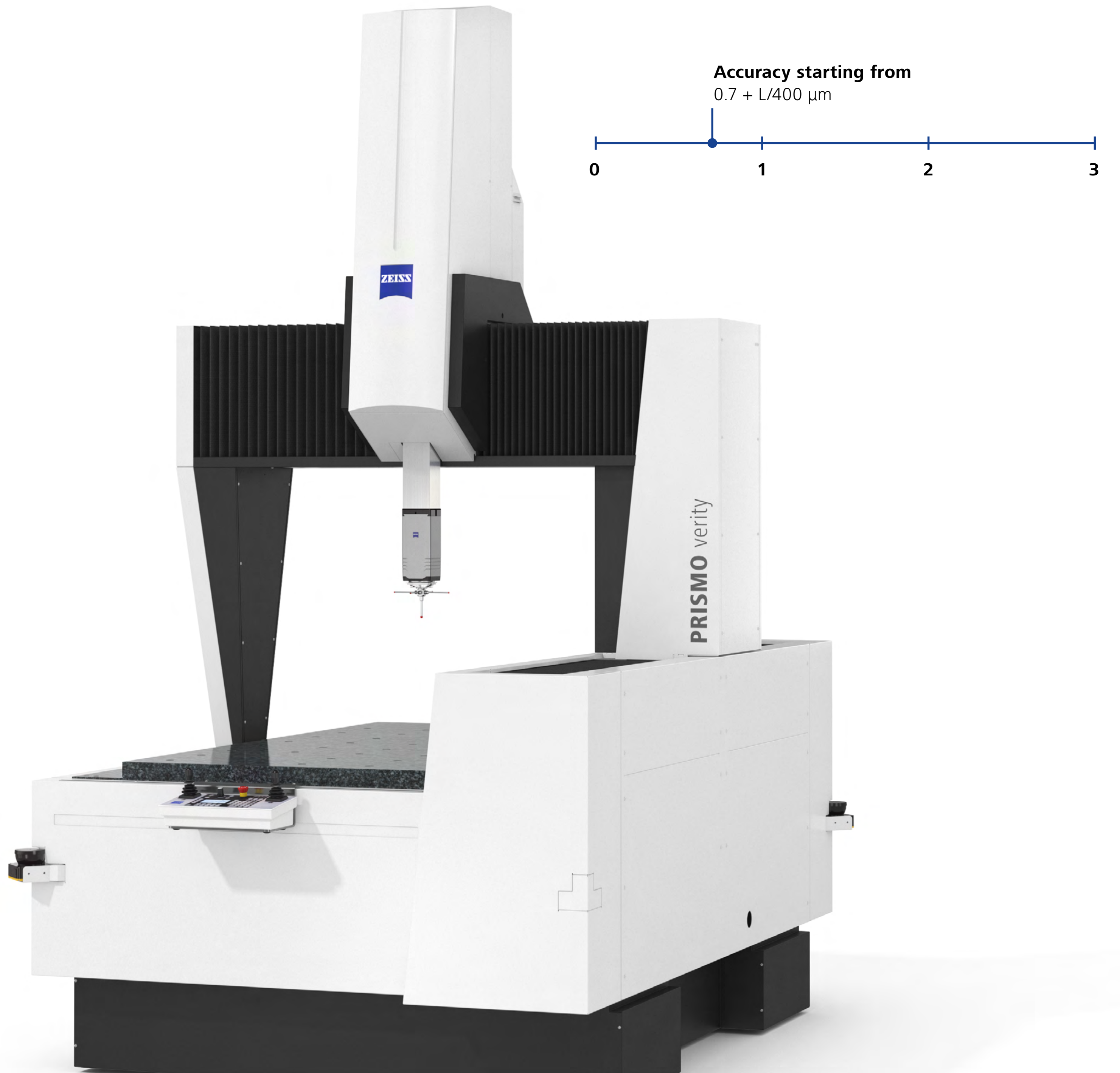
Thanks to its high accuracy, it meets the requirements for class 3 measuring rooms according to the VDI/VDE 2627 standard. As a result, all necessary measurements can be conducted in an air-conditioned chamber set to 19–22 °C.

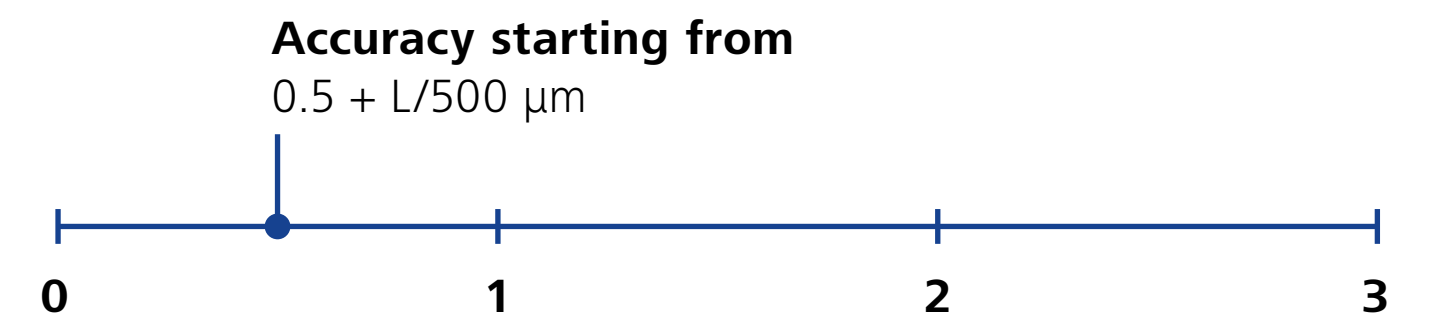
Top price-performance ratio

Boasting a number of enhancements drawn from ZEISS PRISMO ultra – including CAA corrections, ZERODUR® scales, and improved working instructions – ZEISS PRISMO verity delivers optimum results where maximum precision matters most.

High-resolution ZERODUR® scales

With 80 nm resolution and a CTE of nearly zero, these floating scales promote accuracy while eliminating the impact of torsion and temperature variations. They remove the need for temperature sensors and require no temperature correction themselves.





ZEISS PRISMO ultra

Highest precision

Top accuracy and reproducibility

ZEISS PRISMO ultra boasts numerous next-level features including thermal bending compensation, an active pneumatic damping system, improved air bearings, and ZERODUR® scales with 20 nm resolution. These ensure remarkable precision and stability.

Form measurement with guaranteed quality

The optional form measurement package including the RT-AB select guarantees the calibrated value of a ring gauge within $0.2 \mu\text{m}$ or better – as confirmed by a highly respected German institute. Following the golden rule, the measurement tolerances like roundness and cylinder form are guaranteed from $2-3 \mu\text{m}$.

Excellent results guaranteed

Enhanced CAA methods such as bending of the calibration sphere, improved tensor calibration, and dedicated CAA corrections for RT measurements guarantee maximum precision even at high speeds and promote outstanding CMM stability by combating influencing factors.

Individualized installation and acceptance

Each ZEISS PRISMO ultra granite plate undergoes a 3-month acclimatization prior to delivery. Final acceptance takes place in a dedicated climate-controlled chamber for perfect adjustment. A precision test is performed after installation and an expert acceptance test follows 4–6 weeks later.

ZEISS PRISMO fortis

Close to production

Maximum temperature gradient

The thermal bending correction featuring additional temperature sensors in the granite plate, the anti-vibration pneumatic damping system, and floating ZERODUR® scales with 80 nm resolution ensure accuracy and guaranteed temperature stability up to 40 °C.

Guaranteed high precision outside quality lab

Consistent refinement of the individual components means ZEISS PRISMO fortis is ready for integration in production. As it does not require an air-conditioned measuring room, this saves on substantial investment costs. The CMM can also be deployed in a quality lab if desired.

Driving automation forward

Performing quality inspection at the production line saves time on component transport. The optional U-shaped granite ensures loss-free use of the measuring volume (PRISMO 12/18/10 fortis only), even with an automated loading system. This cuts costs while boosting efficiency and reproducibility.

Compatible with ZEISS VAST Rotary Table (ZVR)

ZEISS PRISMO 7/12/7 fortis and ZEISS PRISMO 12/18/10 fortis are uniquely compatible with ZVR, which enables faster movement of the rotary table for faster measurement times. The benefit of higher rotation speed is multiplied as workpieces are measured on different levels.





VAST XT gold
(standard PRISMO and PRISMO
verity)
VAST XTR gold
(not for PRISMO ultra)

VAST gold

RDS (carrier)

Optical

Tactile

ROTOS

ViScan

VAST XXT

Articulating Stylus

LineScan

DotScan

ZEISS mass technology

Maximum application flexibility

The ZEISS multi application sensor system (ZEISS mass technology) is supplied as standard with every ZEISS PRISMO. ZEISS mass enables tactile, optical, and roughness measurement on a single ZEISS machine. Its common interface supports the exchange of sensors in just a few steps. And as new sensors are easily added to the portfolio, it offers future-proof performance.

Performance accelerators

Maximum speed and agility

ZEISS VAST Navigator Technology

Automatically configures the optimum scanning speed to reduce user error. Promotes increased scanning speed, consistent accuracy, and reliable and repeatable results.

ZEISS CALYPSO VAST Probing

Significantly reduces the time spent on single-point measurement while ensuring adequate accuracy. Measurement can be performed up to 25% faster (not for PRISMO 7/9/5, PRISMO 7/9/7, and PRISMO 7/9/5 verity).

ZEISS CALYPSO Pallet Optimizer

Changes the measurement strategy from the traditional probe-by-probe method to the feature-by-feature method – for an entire pallet at once. This significantly shortens the measuring time, reduces the need for styli changes, slashes costs, and boosts efficiency.

ZEISS VAST Rotary Table Axis (ZVRA)

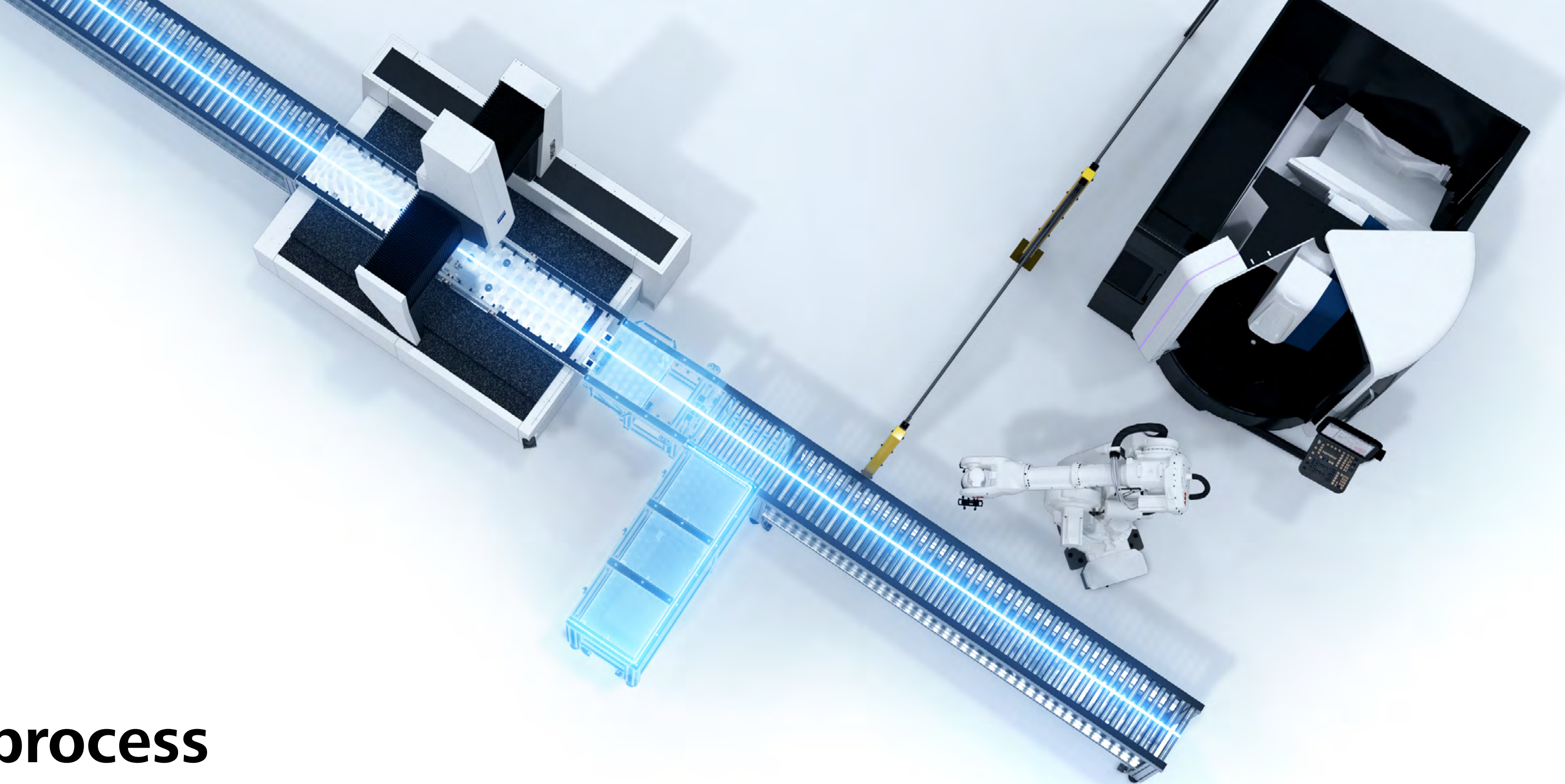
Defines the axis of the rotary table for accurate and reliable measurement. Where axis definition previously involved 6 single-point measurements, ZVRA performs one continuous movement in a fraction of the time.

Unleash the full efficiency of your process

Combining maximum productivity with minimum expense poses several challenges. While delivering high-quality products that meet tight tolerances, manufacturers must optimize processes to achieve increased throughput, reduced rejects, and automated production steps. The ZEISS Integration Series of automating, operating, loading, and custom solutions integrates quality assurance, upgrades processes, and increases productivity by identifying the relevant solution to suit each CMM.

All products and interfaces are easy to use, saving time and training costs. The range extends from ergonomic manual loading systems to fully automated cells that increase the throughput of quality assurance systems by maximizing machine utilization. ZEISS offers these products as standard solutions or as custom projects that are perfectly adapted to individual processes. They are equally at home in measuring rooms and production environments.

- Automating: CMMs and peripherals
- Operating: shop floor integration of QA data
Loading: part flow, operating times, safety
- Custom: solutions for all production needs



Technical data



ZEISS PRISMO



ZEISS PRISMO verity



ZEISS PRISMO ultra



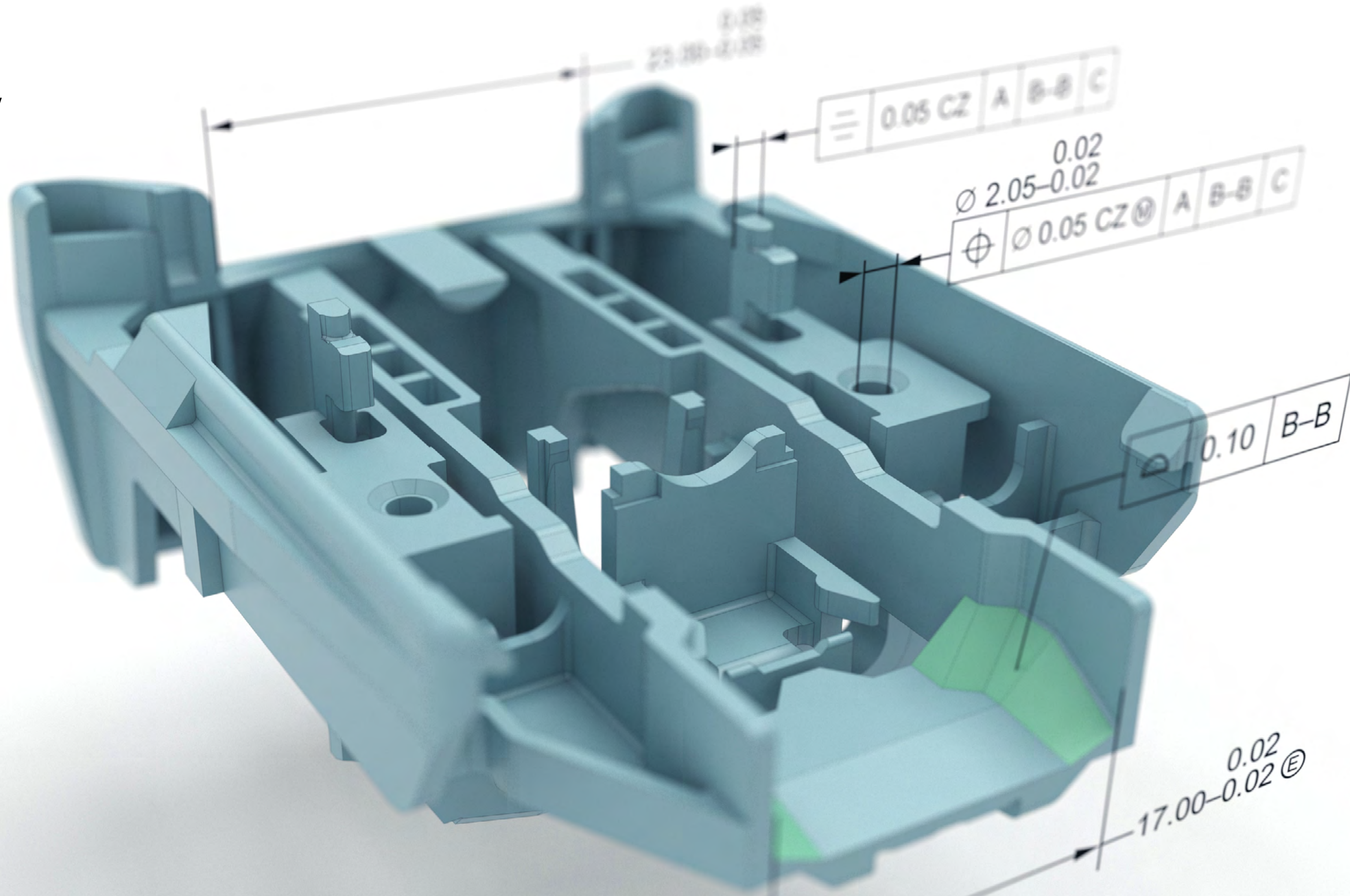
ZEISS PRISMO fortis

Location	Quality lab (offline)	Quality lab (offline)	Quality lab (offline)	Production (inline)
Accuracy starting from	0.9 + L/350 μm	0.7 + L/400 μm	0.5 + L/500 μm	0.7 + L/400 μm (at 22 °C), up to 2.7 + L/80 μm (at 40 °C)
Temperature	19–22 °C	19–22 °C	20–22 °C	15–40 °C with TVA (Temperature Variable Accuracy)
ZEISS mass technology	As standard	As standard	As standard	As standard
DGUV compliance	✓	✓	✓	✓
Retrofit of older models	✓	✓	✓	✓
ZEISS PowerSaver	✓	✓	✓	✓
ZVRA, ZVR compatibility	ZVRA (as option)	ZVRA (as option)	ZVRA (as option)	ZVRA (as option) ZVR (7/12/7 fortis and 12/18/10 fortis)
Glass ceramic scales	✓ Robax®: resolution 200 nm	✓ ZERODUR®: resolution 80 nm	✓ ZERODUR®: resolution 20 nm	✓ ZERODUR®: resolution 80 nm
Sizes	7/9/5 – 16/42/14	7/9/5 – 12/18/10	7/10/5 – 16/30/10	7/12/7 – 12/18/10

ZEISS CALYPSO

Software for dimensional measurement technology

ZEISS CALYPSO measures standard geometries simply, quickly and reliably. Program inspection plans easily by clicking on the desired features. Travel paths are generated automatically and optimally by the software. Thanks to numerous optional extensions, ZEISS CALYPSO also offers the right tools for special requirements, for example with ZEISS CALYPSO VAST probing and ZEISS CALYPSO pallet optimizer. These functions allow measurements to be carried out up to 25% faster.



ZEISS Industrial Quality Solutions

ZEISS Industrial Quality Solutions is a leading manufacturer of multidimensional metrology solutions. These include coordinate measuring machines, optical and multi-sensor systems, microscopy systems for industrial quality assurance as well as metrology software for the automotive, aircraft, mechanical engineering, plastics and medical technology industries.

Innovative technologies such as 3D X-ray metrology for quality assurance complete the portfolio.

In addition, ZEISS Industrial Quality Solutions offers a broad global spectrum of customer services with ZEISS Quality Excellence Centers close to its customers.



Your holistic technology partner

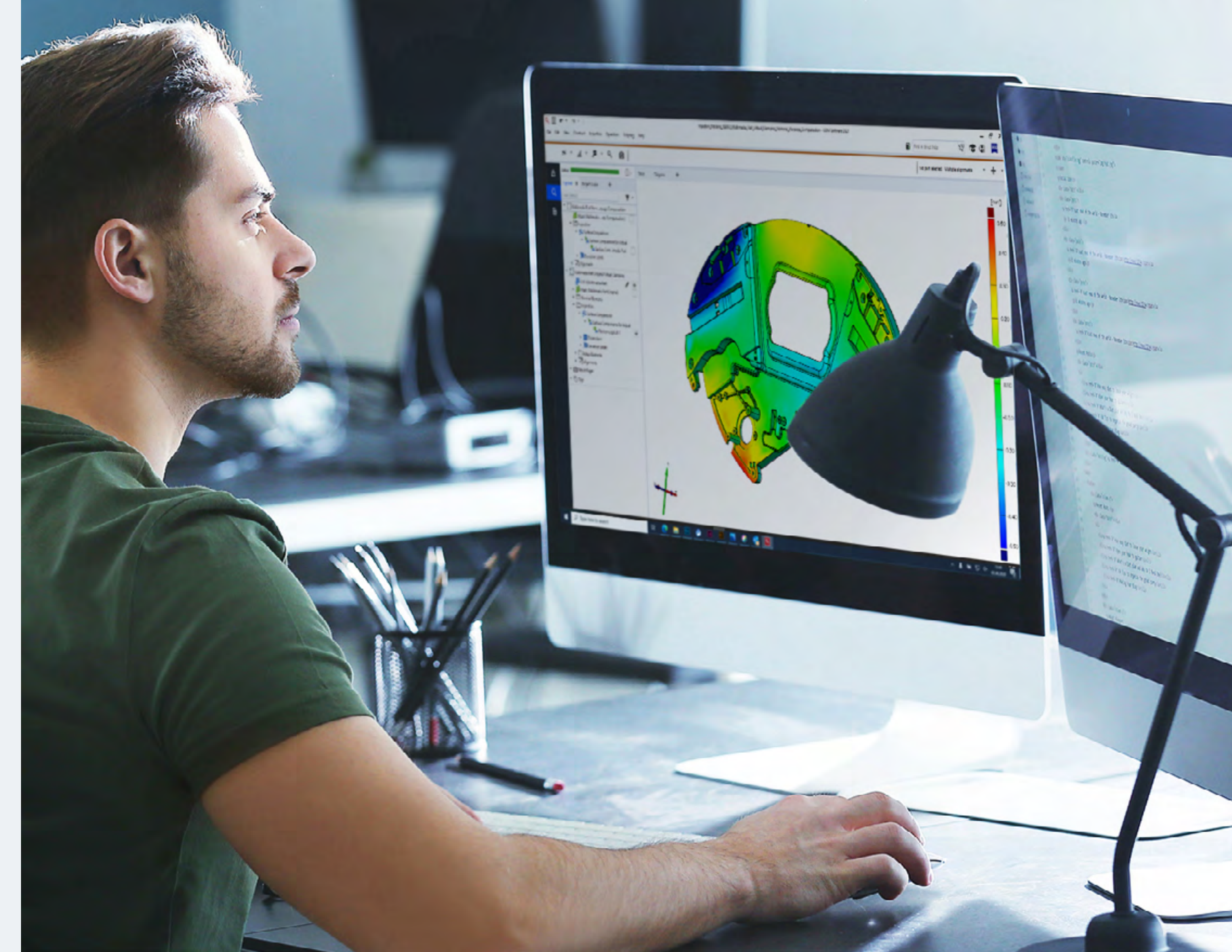
Numerous services and training courses support you in your daily work with 3D measuring technology. Training courses and webinars help you to extend your knowledge about using the software and get to know more application fields for the measuring systems.

The ZEISS Quality Suite supports you with instructions, tutorials and frequently asked questions and answers. Moreover, the user forum offers a platform for mutual exchange and support.

At conferences and application-based workshops, webinars and digital demos, ZEISS directly shares process and measurement technology know-how. In addition, contractual support and services for all measuring solutions are available.

Training

ZEISS training centers offer training and eLearning courses for all levels of expertise. The training courses follow an internationally standardized concept and are implemented by our certified partners in the corresponding national language. In addition to online training courses and scheduled courses in our training centers, customer-specific on-site training courses are also available on request.



Support und Service

ZEISS provides support and services to assist you quickly and reliably if required. These are based on the following three pillars: Remote Assistance, Services and Contract Plans.



Did ZEISS PRISMO family get your attention?

Contact us for a free demonstration –
on site or online.

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