
# 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.


ZEISS PRISMO


ZEISS PRISMO verity


ZEISS PRISMO ultra


ZEISS PRISMO fortis


# 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.


**Accuracy starting from**
0.9 + L/350 µm


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 ° 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.


**Accuracy starting from**
0.5 + L/500 µm


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 µm 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 µm.

**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.


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

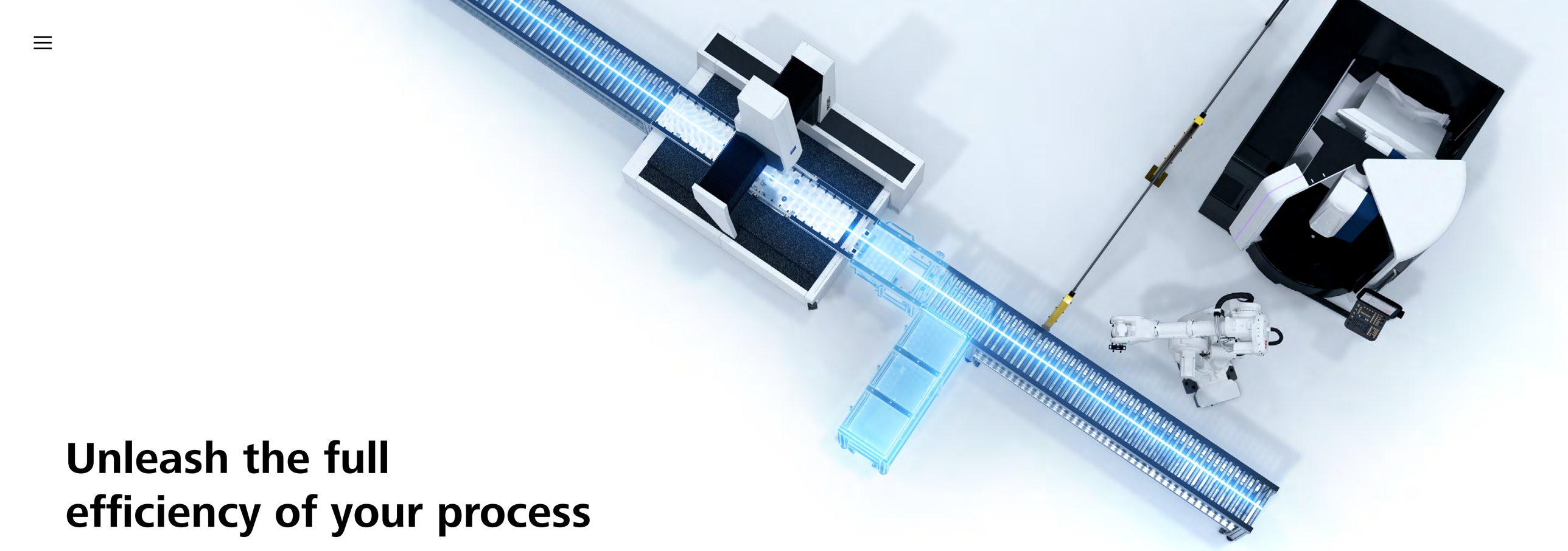
Significantly reduces the time spent on single-point measurement while ensuring adequate accuracy. Measurement can be performed up to 25% faster (not for PRISMO 7/9/5, PRISMO 7/9/7, and PRISMO 7/9/5 verity).

## 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

Learn more

# Technical data

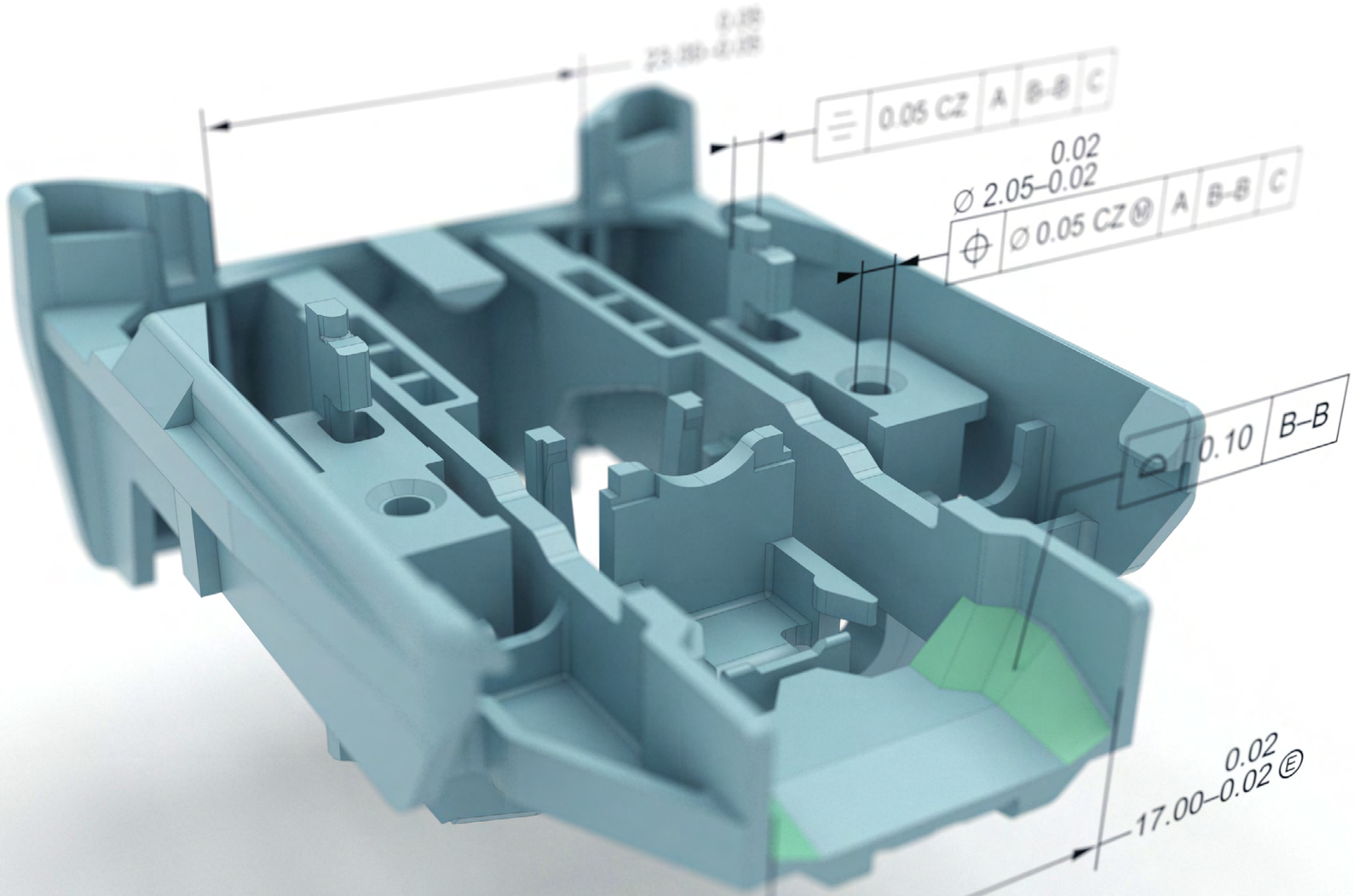
| | ZEISS PRISMO | ZEISS PRISMO verity | ZEISS PRISMO ultra | ZEISS PRISMO fortis |
|---|---|---|---|---|
| **Location** | Quality lab (offline) | Quality lab (offline) | Quality lab (offline) | Production (inline) |
| **Accuracy starting from** | 0.9 + L/350 µm | 0.7 + L/400 µm | 0.5 + L/500 µm | 0.7 + L/400 µm (at 22 °C),<br>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<br>(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)<br>ZVR (7/12/7 fortis and 12/18/10 fortis) |
| **Glass ceramic scales** | ✓<br>Robax®: resolution 200 nm | ✓<br>ZERODUR®: resolution 80 nm | ✓<br>ZERODUR®: resolution 20 nm | ✓<br>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 |

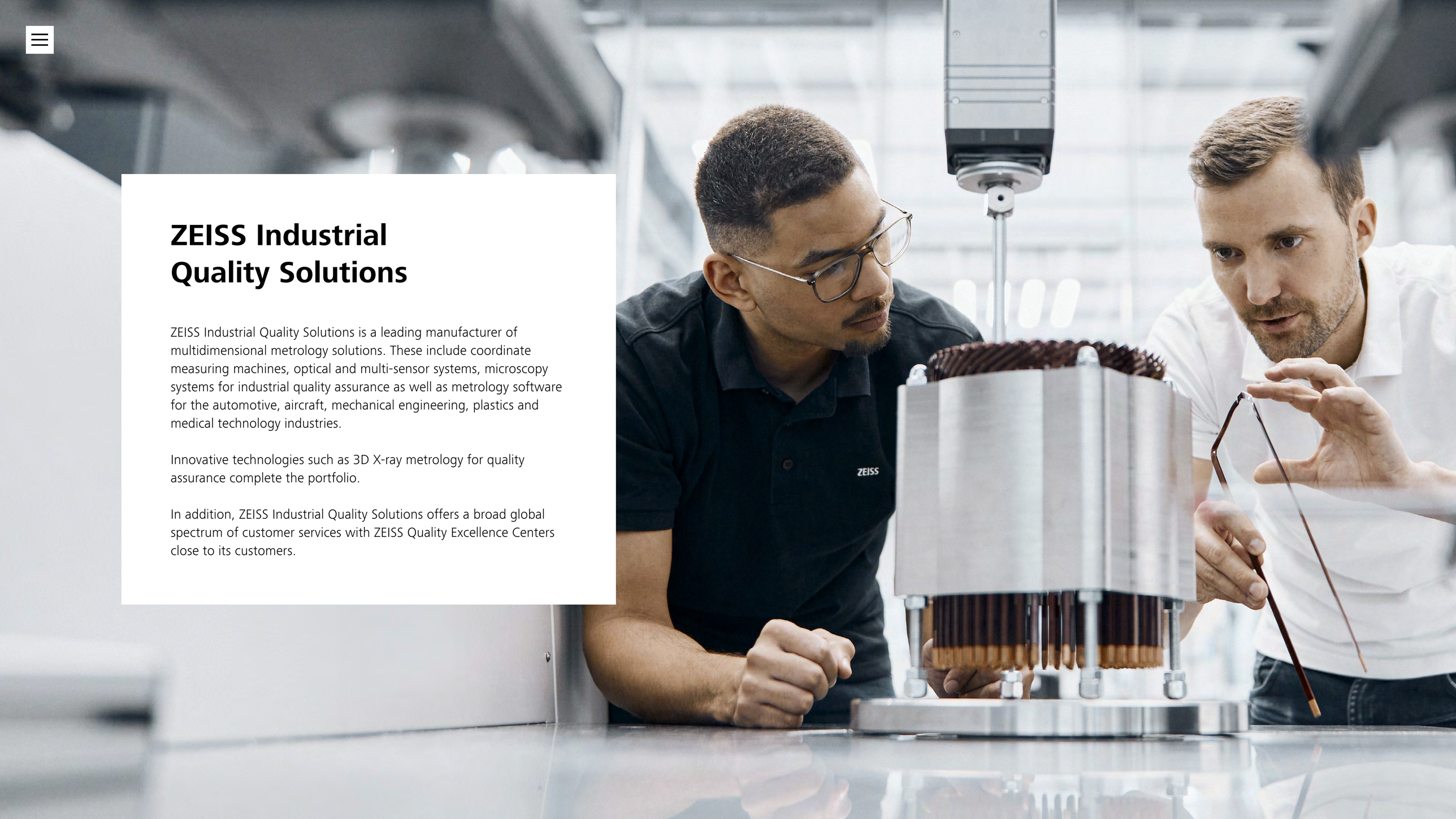
ZEISS CALYPSO

# 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.

Learn more






# 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.

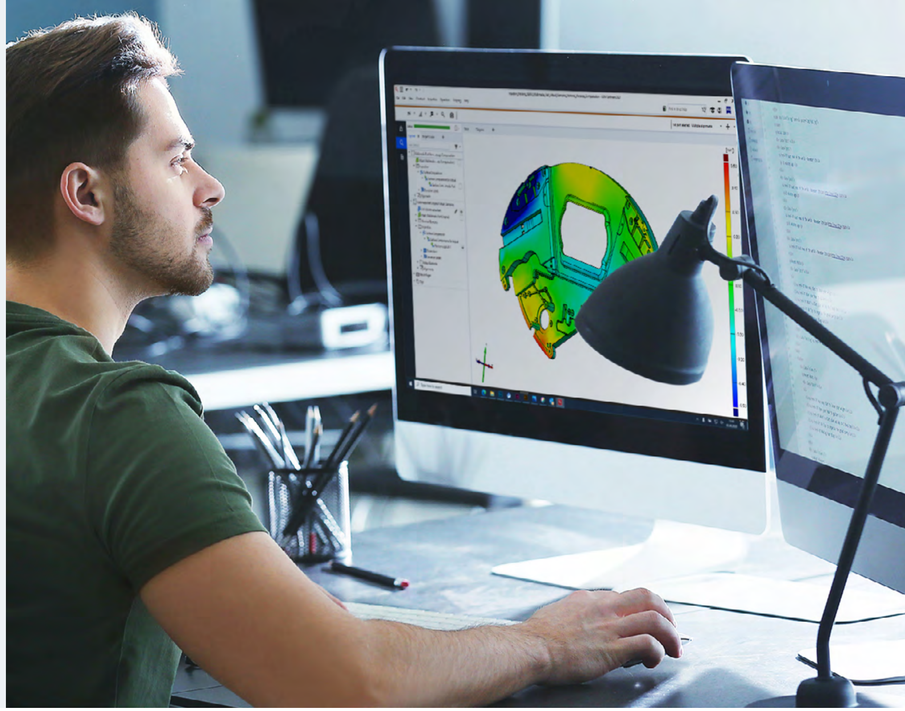
The ZEISS Quality Suite supports you with instructions, tutorials and frequently asked questions and answers. Moreover, the user forum offers a platform for mutual exchange and support.

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.

Learn more



## 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.

Learn more

# Did ZEISS PRISMO family get your attention?

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

Contact us

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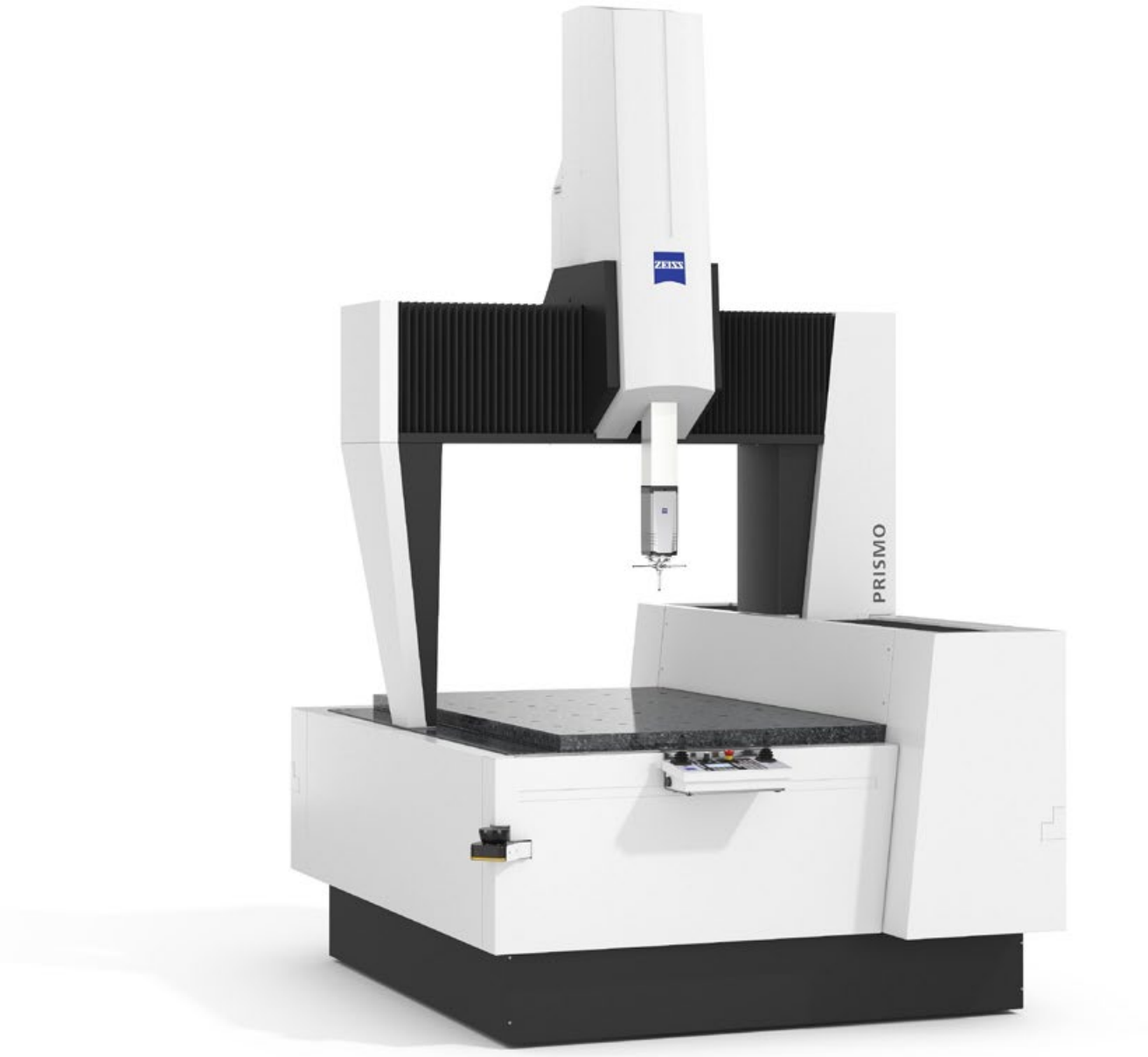
**EN_PRISMO** Digital Version CZ-08/2024




# ZEISS PRISMO®

Specifications

ZEISS

Seeing beyond

Version: 2024-10

| System description | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Type as per ISO 10360-1:2000** | Bridge-type CMM with a moveable bridge | | | | | | |
| **Operating mode** | Motorized/CNC | | | | | | |
| **Sensor mounts** | Fixed installation | | | | | | |
| **Software** | ZEISS CALYPSO, ZEISS GEAR PRO | | | | | | |
| | | | | **ZEISS PRISMO 5+7 X=700 und X=900** | **ZEISS PRISMO 10 X=1200** | **ZEISS PRISMO 10 X=1600** | **ZEISS PRISMO ultra** |
| **Travel speeds** | Motorized | | in mm/s | 0 to 70 | 0 to 70 | 0 to 70 | 0 to 70 |
| | CNC | Axis | in mm/s | max. 300 | max. 300 | max. 300 | max. 300 |
| | | Vector | in mm/s | max. 520 | max. 520 | max. 520 | max. 520 |
| | Scanning speed (with navigator technology) | | in mm/s | max. 300 | max. 300 | max. 300 | max. 300 |
| **Acceleration** | | Axis | in m/s² | max. 1.2 | max. 0.8 | max. 0.8 | max. 0.38 |
| | | Vector | in m/s² | max. 2.07 | max. 1.38 | max. 1.38 | max. 0.67 |

**ZEISS PRISMO ultra: sensor and accuracy** [5]

The CMM specifications are only valid when using original accessories by ZEISS. The specified parameters are observed in the application of the internal test instructions for acceptance testing and in the use of the released standards in accordance with the ISO 10360 series.

**ZEISS VAST gold** [1]

Active scanning and multi-point sensor.
Scanning measurement rate of up to 500 points/s. Variable measuring force of between 50 and 1000 mN for data transfer.

**ZEISS VAST gold: stylus: max. length = 800 mm, max. weight = 600 g incl. stylus adapter, min. stylus tip diameter = 0.3 mm.**
**With navigator and performance technology to increase measuring performance.**

| | | | | **ZEISS PRISMO 5 + 7 X=700 and X=900** | **ZEISS PRISMO 12/18/7** | **ZEISS PRISMO 10 X=1200** | **ZEISS PRISMO 10 X=1600** |
|---|---|---|---|---|---|---|---|
| **Length measurement error** [2] MPE complies with ISO 10360-2:2009 | E0 | in µm | 20°C - 22°C | 0.5 + L/500 µm | 0.9 + L/500 | 1.2 + L/500 µm | 1.9 + L/400 µm |
| | | | - | - | - | 1.0 + L/500 [6] | 1.6 + L/400 [7] |
| | E150 | in µm | 20°C - 22°C | 0.8 + L/500 µm | 1.2 + L/500 | 1.5 + L/500 µm | 2.5 + L/400 µm |
| **Repeatability range of E0** MPL complies with ISO 10360-2:2009 | R0 | in µm | | 0.4 | 0.5 | 0.7 | 0.8 |
| **Scanning error** MPE complies with ISO 10360-4:2000 | THP | in µm | | 0.9 | 0.9 | 1.1 | 1.6 |
| Required measuring time MPT | τ | in s | | 40 | 40 | 40 | 45 |
| **Form measurement error** [3] MPE for roundness complies with ISO 12181:2011 (VDI/VDE 2617, sheet 2.2:2000) | RONt (MZCI) | in µm | | 0.5 | 0.6 | 0.7 | 0.9 |
| **Single stylus form probing error** MPE complies with ISO 10360-5:2010 | PFTU | in µm | | 0.5 | 0.6 | 0.8 | 1.1 |
| **Multi-stylus form probing error** MPE complies with ISO 10360-5:2010 | PFTM [4] | in µm | | 1.9 | 2.0 | 2.2 | 2.3 |
| **Multi-stylus dimension probing error** MPE complies with ISO 10360-5:2010 | PSTM [4] | in µm | | 0.6 | 0.7 | 0.9 | 1.1 |
| **Multi-stylus location probing error** MPL complies with ISO 10360-5:2010 | PLTM [4] | in µm | | 1.2 | 1.3 | 1.5 | 1.7 |

1) Acceptance test with a stylus length of 60 mm and a tip diameter of 8 mm. Also valid for other styli. Dia. 3 x 33 mm, dia. 5 x 50 mm and dia. 12 x 92 mm were tested with PRISMO ultra.
2) Measuring length L in mm.
3) Roundness in scanning operations on a 50 mm ring gauge with v 5 mm/sec, filter 50 UPR.
4) Measuring location near the calibration position to document sensor properties.
5) Accuracy in combination with the reference standard for the PRISMO ultra and the reference sphere bending correction.
6) In the limited measuring range 800/1000/600.
7) In the limited measuring range 800/1200/600.

**ZEISS PRISMO verity sensors and accuracy**

The CMM specifications are only valid when using original accessories by ZEISS. The specified parameters are observed in the application of the internal test instructions for acceptance testing and in the use of the released standards in accordance with the ISO 10360 series.

**ZEISS VAST XT gold** [1]
**ZEISS VAST gold** [1]
**ZEISS VAST XTR gold** [1]

Active scanning and multi-point sensor.
Scanning measurement rate of up to 500 points/s. Variable measuring force of between 50 and 1000 mN for data transfer.

**ZEISS VAST XT gold:** max. length = 500 mm, max. weight = 500 g incl. stylus adapter, min. stylus tip diameter = 0.5 mm.
**ZEISS VAST gold:** stylus: max. length = 800 mm, max. weight = 600 g incl. stylus adapter, min. stylus tip diameter = 0.3 mm.
**ZEISS VAST XTR gold:** max. length = 350 mm, max. weight = 500 g incl. stylus adapter, min. stylus tip diameter = 0.5 mm.
With navigator and performance technology to increase measuring performance.

| | | | ZEISS PRISMO verity x=700 and x=900 | | ZEISS PRISMO verity 12/18/10 | |
|---|---|---|---|---|---|---|
| **Length measurement error** [2]<br>MPE complies with ISO 10360-2:2009 | E0 | in µm | 19°C - 22°C | 0.7 + L/400 | 19°C - 22°C | 1.3 + L/400 |
| | E150 | in µm | | 0.9 + L/400 | | 1.5 + L/400 |
| **Repeatability range of E0**<br>MPL complies with ISO 10360-2:2009 | R0 | in µm | | 0.6 | | 0.8 |
| **Scanning error**<br>MPE complies with ISO 10360-4:2000 | THP | in µm | | 0.9 | | 1.3 |
| Required measuring time MPT | τ | in s | | 40 | | 40 |
| **Form measurement error** [3]<br>MPE for roundness complies with ISO 12181:2011 (VDI/VDE 2617, sheet 2.2:2000) | RONt (MZCI) | in µm | | 0.7 | | 0.9 |
| **Single stylus form probing error**<br>**MPE complies with ISO 10360-5:2010** | PFTU | in µm | | 0.9 | | 1.0 |
| **Multi-stylus form probing error**<br>MPE complies with ISO 10360-5:2010 | PFTM [4] | in µm | | 2.0<br>2.6 [5] | | 2.4<br>3.0 [5] |
| **Multi-stylus dimension probing error**<br>MPE complies with ISO 10360-5:2010 | PSTM [4] | in µm | | 0.8 | | 1.1 |
| **Multi-stylus location probing error**<br>MPL complies with ISO 10360-5:2010 | PLTM [4] | in µm | | 1.4<br>1.5 [5] | | 1.8<br>1.9 [5] |

1) Acceptance test with a stylus length of 60 mm and a tip diameter of 8 mm. Also valid for other styli. Dia. 3 x 33 mm, dia. 5 x 50 mm, dia. 8 x 114 mm and dia. 12 x 92 mm were tested with PRISMO verity (in conjunction with the reference standards belonging to the CMM).
2) Measuring length L in mm.
3) Roundness in scanning operations on a 50 mm ring gauge with v 5 mm/sec, filter 50 UPR.
4) Measuring location near the calibration position to document sensor properties.
5) Applies to ZEISS VAST XTR gold.

**ZEISS PRISMO sensors and accuracy**

The CMM specifications are only valid when using original accessories by ZEISS. The specified parameters are observed in the application of the internal test instructions for acceptance testing and in the use of the released standards in accordance with the ISO 10360 series.

**ZEISS VAST XT gold** [1]
**ZEISS VAST gold** [1]
**ZEISS VAST XTR gold** [1]

Active scanning and multi-point sensor.
Scanning measurement rate of up to 500 points/s. Variable measuring force of between 50 and 1000 mN for data transfer.

**ZEISS VAST XT gold:** max. length = 500 mm, max. weight = 500 g incl. stylus adapter, min. stylus tip diameter = 0.5 mm.
**ZEISS VAST gold:** stylus: max. length = 800 mm, max. weight = 600 g incl. stylus adapter, min. stylus tip diameter = 0.3 mm.
**ZEISS VAST XTR gold:** max. length = 350 mm, max. weight = 500 g incl. stylus adapter, min. stylus tip diameter = 0.5 mm.
With navigator and performance technology to increase measuring performance.

| | | | ZEISS PRISMO 5 + 7 X=700 and X=900 | | ZEISS PRISMO 10 X=1200 | | ZEISS PRISMO 10 X=1600 | | ZEISS PRISMO 14 X=1600 | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Length measurement error** [2] MPE complies with ISO 10360-2:2009 | E0/E150 | in µm | 19°C - 21°C | 0.9 + L/350 [3] | 18°C - 22°C | 1.5 + L/350 | 18°C - 22°C | 2.0 + L/300 | 18 °C - 22 °C | 2,7 + L/300 |
| | | | 15°C - 30°C | 1.2 + L/250 | 18°C - 28°C | 1.8 + L/300 [4] | 18°C - 28°C | 3.4 + L/270 [4] | MPE (E150) | 3,0 + L/250 |
| **Repeatability range of E0** MPL complies with ISO 10360-2:2009 | R0 | in µm | | 0.8 | | 1.1 | | 1.5 | | 2,0 |
| **Scanning error** MPE complies with ISO 10360-4:2000 | THP | in µm | 19°C - 21°C | 1.3 (PRISMO 5)<br>1.7 (PRISMO 7) | 18°C - 22°C | 1.7 | 18°C - 22°C | 2.5 | 18 °C - 22 °C | 2,9 |
| Required measuring time MPT | τ | in s | | 40 | | 40 | | 40 | | 50 |
| **Form measurement error** [5] MPE for roundness complies with ISO 12181:2011 (VDI/VDE 2617, sheet 2.2:2000) | RONt (MZCI) | in µm | | 1.0 | | 1.3 | | 1.9 | | 2,3 |
| **Single stylus form probing error MPE complies with ISO 10360-5:2010** | PFTU | in µm | | 1.0 | | 1.3 | | 1.9 | | 2,3 |
| **Multi-stylus form probing error** MPE complies with ISO 10360-5:2010 | PFTM [6] | in µm | | 2.1 (PRISMO 5)<br>2.7 [7]<br>2.4 (PRISMO 7)<br>3.0 [7] | | 2.7<br>3.3 [7] | | 2.9<br>3.5 [7] | | 3,3 |
| **Multi-stylus dimension probing error** MPE complies with ISO 10360-5:2010 | PSTM [6] | in µm | | 1.0 (PRISMO 5)<br>1.2 (PRISMO 7) | | 1.4 | | 1.6 | | 1,8 |
| **Multi-stylus location probing error** MPL complies with ISO 10360-5:2010 | PLTM [6] | in µm | | 1.6 (PRISMO 5)<br>1.7 [7]<br>1.8 (PRISMO 7)<br>1.9 [7] | | 2.0<br>2.1 [7] | | 2.1<br>2.2 [7] | | 2,4 |

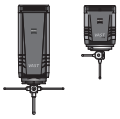
1) Acceptance test with a stylus length of 60 mm and a tip diameter of 8 mm. Also valid for other styli. Dia. 3 x 33 mm, dia. 5 x 50 mm, dia. 8 x 114 mm and dia. 12 x 92 mm were tested with PRISMO (in conjunction with the reference standards belonging to the CMM).
2) Measuring length L in mm.
3) 1.2 + L/350 at 18°C - 22°C.
4) ZEISS PRISMO 10 (Y > 2400) 18°C - 24°C.
5) Roundness in scanning operations on a 50 mm ring gauge with v 5 mm/sec, filter 50 UPR.
6) Measuring location near the calibration position to document sensor properties.
7) Applies to ZEISS VAST XTR gold.

**ZEISS PRISMO fortis sensors and accuracy**

The CMM specifications are only valid when using original accessories by ZEISS. The specified parameters are observed in the application of the internal test instructions for acceptance testing and in the use of the released standards in accordance with the ISO 10360 series.

**ZEISS VAST gold** [1]
**ZEISS VAST XTR gold** [1]

Active scanning and multi-point sensor.
Scanning measurement rate of up to 500 points/s. Variable measuring force of between 50 and 1000 mN for data transfer.



**ZEISS VAST gold: stylus: max. length = 800 mm, max. weight = 600 g incl. stylus adapter, min. stylus tip diameter = 0.3 mm.**
**ZEISS VAST XTR gold: max. length = 350 mm, max. weight = 500 g incl. stylus adapter, min. stylus tip diameter = 0.5 mm.**
**With navigator and performance technology to increase measuring performance.**

| | | | | ZEISS PRISMO fortis 7/12/7, 9/15/7 | ZEISS PRISMO fortis 12/18/10, 12/18/10 U-stone |
|---|---|---|---|---|---|
| **Length measurement error** [2]<br>MPE complies with ISO 10360-2:2009 | E0 | in µm | 22 °C | 0.7 + L/400 | 1.3 + L/400 |
| | E150 | in µm | | 0.9 + L/400 | 1.5 + L/400 |
| **TVA** [2]<br>(Temperature Variable Accuracy) | TVA MPE_E0 | in µm | 15 °C - 40 °C | 0.7 + (0.3\|Δϑ\|) + L/(400 - (18 \|Δϑ\|))<br>\|Δϑ\| = deviation in K from +22°C [3] | 1.3 + (0,08\|Δϑ\|) + L/(400 - (17.5 \|Δϑ\|))<br>\|Δϑ\| = deviation in K from +22°C [3] |
| **Length measurement error** [2]<br>MPE nach ISO 10360-2:2009 | E0 | in µm | at 26 °C<br>at 30 °C<br>at 37 °C<br>at 40 °C | 1.9 + L/330<br>3.1 + L/260<br>5.2 + L/130<br>6.1 + L/80 | 1.6 + L/330<br>1.9 + L/260<br>2.5 + L/140<br>2.7 + L/80 |
| **Repeatability range of E0**<br>MPL complies with ISO 10360-2:2009 | R0 | in µm | | 0.6 | 0.8 |
| **Scanning error**<br>MPE complies with ISO 10360-4:2000 | THP | in µm | 19 °C - 21 °C | 0.9 | 1.3 |
| Required measuring time MPT | τ | in s | | 40 | 40 |
| **Form measurement error** [5]<br>MPE for roundness complies with ISO 12181:2011<br>(VDI/VDE 2617, sheet 2.2:2000) | RONt<br>(MZCI) | in µm | | 0.7 | 0.9 |
| **Single stylus form probing error**<br>MPE complies with ISO 10360-5:2010 | PFTU | in µm | | 0.9 | 1.0 |
| **Multi-stylus form probing error**<br>MPE complies with ISO 10360-5:2010 | PFTM [5] | in µm | | 2.0<br>2.6 [6] | 2.4<br>3.0 [6] |
| **Multi-stylus dimension probing error**<br>MPE complies with ISO 10360-5:2010 | PSTM [5] | in µm | | 0.8 | 1.1 |
| **Multi-stylus location probing error**<br>MPL complies with ISO 10360-5:2010 | PLTM [5] | in µm | | 1.4<br>1.5 [6] | 1.8<br>1.9 [6] |

1) Acceptance test with a stylus length of 60 mm and a tip diameter of 8 mm. Also valid for other styli. Dia. 3 x 33 mm, dia. 5 x 50 mm, dia. 8 x 114 mm and dia. 12 x 92 mm were tested with ZEISS PRISMO fortis (in conjunction with the reference standards belonging to the CMM).
2) Measuring length L in mm.
3) Explanation: Amount value |Δϑ|: z. B. on 20 °C |Δϑ| = 2, on 24 °C |Δϑ| = 2.
4) Roundness in scanning operations on a 50 mm ring gauge with v 5 mm/sec, filter 50 UPR.
5) Measuring location near the calibration position to document sensor properties.
6) Applies to ZEISS VAST XTR gold.

**ZEISS PRISMO, ZEISS PRISMO verity, ZEISS PRISMO fortis and ZEISS PRISMO ultra sensors and accuracy**

The CMM specifications are only valid when using original accessories by ZEISS. The specified parameters are observed in the application of the internal test instructions for acceptance testing and in the use of the released standards in accordance with the ISO 10360 series.

**ZEISS RDS-D**

Dynamic ZEISS RDS-D articulating unit for optical and contact sensors.
Lateral swivel axis offers more benefits than articulating systems with front-to-back and lateral tilt axis; front-to-back and lateral tilt range of ±180°, large measuring range, rotation increments of 2.5°, CAA correction to automatically qualify measuring multi-point sensors of all potential 20,736 angular positions.

**ZEISS VAST XXT** [1]

Scanning and multi-point sensor on ZEISS RDS-D. Scanning measurement rate of up to 500 points/s, max. sensor extension = 100 mm
Stylus length with module: TL1 and TL3 = 30 - 150 mm, TL4 = 125 - 250 mm
Max. sensor weight = 15 g, min. stylus tip diameter = 0.3 mm

| | | | | ZEISS PRISMO 5 + 7 X=700 and X=900 | ZEISS PRISMO 10 X=1200 | ZEISS PRISMO 10 X=1600 | ZEISS PRISMO 14 X=1600 |
|---|---|---|---|---|---|---|---|
| **Length measurement error** [2]<br>MPE complies with ISO 10360-2:2009 | E0/E40 | in µm | 18°C - 22°C<br>18°C - 26°C | 1.6 + L/350 µm<br>2.1 + L/300 µm | 2.2 + L/300 µm<br>2.9 + L/250 µm | 3.2 + L/250 µm<br>3.7 + L/200 [3] | 4,0 + L/250 |
| **Repeatability range of E0**<br>MPL complies with ISO 10360-2:2009 | R0 | in µm | | 0.8 | 1.1 | 1.5 | 2.5 |
| **Scanning tolerance**<br>MPE complies with ISO 10360-4:2000 | THP | in µm | | 2.5 | 3.5 | 3.5 | 4.3 |
| Required measuring time MPT | τ | in s | | 50 [9] | 68 | 68 | 68 |
| **Form measurement error** [4]<br>MPE for roundness complies with ISO 12181 (VDI/VDE 2617, sheet 2.2) | RONt (MZCI) | in µm | | 1.7 | 1.9 | 3.0 | 3.0 |
| **Single stylus form probing error**<br>MPE complies with ISO 10360-5:2010 | PFTU | in µm | | 1.7 | 1.9 | 3.0 | 4.0 |

1) Specifications for ZEISS VAST XXT, TL1: l = 50, dia. 3 mm; TL3: l = 60, dia. 5 mm; TL4: l = 125, dia. 3 mm.
2) Measuring length L in mm. Measured with RDS angle position A=0° and B=0°
3) ZEISS PRISMO 10 (Y > 2400) 18°C - 24°C.
4) Roundness in Scanning Mode for V-Scan = 5 mm/s, filter 50 UPR

**ZEISS PRISMO, ZEISS PRISMO verity, ZEISS PRISMO fortis und ZEISS PRISMO ultra Sensoren und Genauigkeit**

| | | | | | |
|---|---|---|---|---|---|
| **ZEISS ViScan** [5]  | Optical 2D image sensor with autofocus on ZEISS RDS-D.<br>Working distance (depending on lens): 75 - 90 mm. | | | | |
| | | | **ZEISS PRISMO 5 + 7 X=700 and X=900** | **ZEISS PRISMO 10 X=1200** | **ZEISS PRISMO 10 +14 X=1600** |
| **Length measurement error** [1]<br>MPE complies with ISO 10360-7:2011 | EU (XY) | in µm | 10 [3] + L/350 | 10 [3] + L/300 | 10 [3] + L/250 |
| **Image processing system probing error**<br>MPE complies with ISO 10360-7:2011 | PFV2D | in µm | 10 [6] | 10 [6] | 10 [6] |
| **ZEISS LineScan** [5] [8]  | Optical laser triangulation scanner on ZEISS RDS-D. | | | | |
| | | | **ZEISS PRISMO 5 + 7 X=700 and X=900** | **ZEISS PRISMO 10 X=1200** | **ZEISS PRISMO 10 +14 X=1600** |
| 8 mm working range<br>32 mm working distance | | | | | |
| **Probing dispersion** [7]<br>MPL complies with ISO 10360-8:2013 | P[Form.Sph.D95 %:Tr:ODS] | in µm | 2.9 | 2.9 | 2.9 |
| Dispersion on sphere | 1 Sigma | in µm | 0.9 | 0.9 | 0.9 |
| 25 mm working range<br>63 mm working distance | | | | | |
| **Probing dispersion** [7]<br>MPL complies with ISO 10360-8:2013 | P[Form.Sph.D95 %:Tr:ODS] | in µm | 12 | 12 | 12 |
| Dispersion on sphere | 1 Sigma | in µm | 4 | 4 | 4 |
| 50 mm working range<br>94 mm working distance | | | | | |
| **Probing dispersion** [7]<br>MPL complies with ISO 10360-8:2013 | P[Form.Sph.D95 %:Tr:ODS] | in µm | 20 | 20 | 20 |
| Dispersion on sphere | 1 Sigma | in µm | 5 | 5 | 5 |
| 100 mm working range<br>220 mm working distance | | | | | |
| **Probing dispersion** [7]<br>MPL complies with ISO 10360-8:2013 | P[Form.Sph.D95 %:Tr:ODS] | in µm | 50 | 50 | 50 |
| Dispersion on sphere | 1 Sigma | in µm | 12 | 12 | 12 |

1) Specifications for ZEISS VAST XXT, TL1: l = 50, dia. 3 mm; TL3: l = 60, dia. 5 mm; TL4: l = 125, dia. 3 mm.
2) Measuring length L in mm. Measured with RDS angle position A=0° and B=0°
3) ZEISS PRISMO 10 (Y > 2400) 18°C - 24°C.
4) Roundness in Scanning Mode for V-Scan = 5 mm/s, filter 50 UPR
5) The use of optical probes requires calibration with a contact probe ZEISS VAST XXT (e.g. VAST XXT TL1).
6) All specifications measured with ZEISS ViScan 1x lens.
7) Probing dispersion in the center of the measuring range on a suitable sphere (30 mm diameter) with a matte surface.
   The working distance information is based on the center of the measuring range.
8) Laser class 2M: the accessible laser beam is in the visible spectral range. It is safe for the eye as long as the exposure time is short (0.25 s) and the cross section is not reduced by optical instruments (e.g. magnifiers, lens elements, telescopes).
9) 68 s for ZEISS PRISMO ultra.

**ZEISS DotScan** [1]
**Measuring range 1 mm**

Optical confocal white light distance sensor on ZEISS RDS-D CAA,
Scanning measuring rate up to 1000 points/s,
Working distance 10,5 mm, resolution 28 nm,
measurable surface inclination to beaming direction 90° ±30° [1], measuring spot diameter 8 µm

| | | | | ZEISS PRISMO 5 + 7 X=700 and X=900 | ZEISS PRISMO 7 + 10 X=1200 | ZEISS PRISMO 10 X=1600 | ZEISS PRISMO 14 X=1600 |
|---|---|---|---|---|---|---|---|
| **Unidirectional length measurement error** MPE complies with ISO 10360-8:2013 | E[Uni:Tr:ODS] in sensor direction | in µm | 18 °C - 22 °C | 1.6 + L/350 | 2.2 + L/300 | 3.2 + L/250 | 4,0 + L/250 |
| **Dimension probing error** MPE complies with ISO 10360-8:2013 | P[Size.Sph.1x25:Tr:ODS] in sensor direction | in µm | 18 °C - 22 °C | 5 | 5 | 5 | 5 |

**ZEISS DotScan** [1]
**Measuring range 3 mm**

Optical confocal white light distance sensor on ZEISS RDS-D CAA,
Scanning measuring rate up to 1000 points/s,
Working distance 21,5 mm, resolution 36 nm,
measurable surface inclination to beaming direction 90° ±24° [1], measuring spot diameter 9 µm

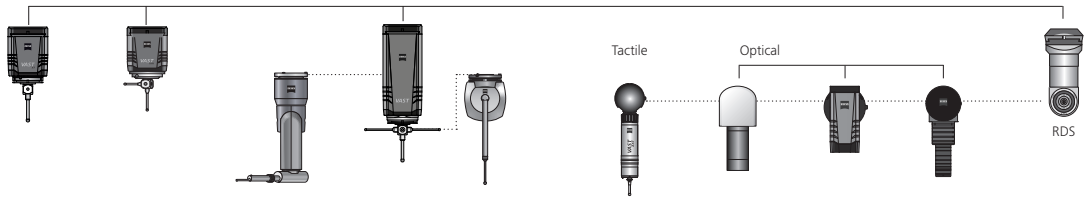
| | | | | ZEISS PRISMO 5 + 7 X=700 and X=900 | ZEISS PRISMO 7 + 10 X=1200 | ZEISS PRISMO 10 X=1600 | ZEISS PRISMO 14 X=1600 |
|---|---|---|---|---|---|---|---|
| **Unidirectional length measurement error** MPE complies with ISO 10360-8:2013 | E[Uni:Tr:ODS] in sensor direction | in µm | 18 °C - 22 °C | 1.9 + L/350 | 2.5 + L/300 | 3.5 + L/250 | 4,3 + L/250 |
| **Dimension probing error** MPE complies with ISO 10360-8:2013 | P[Size.Sph.1x25:Tr:ODS] in sensor direction | in µm | 18 °C - 22 °C | 5 | 5 | 5 | 5 |

**ZEISS DotScan** [1]
**Measuring range 10 mm**

Optical confocal white light distance sensor on ZEISS RDS-D CAA,
Scanning measuring rate up to 1000 points/s,
Working distance 55 mm, resolution 60 nm,
measurable surface inclination to beaming direction 90° ±17° [1], measuring spot diameter 16 µm

| | | | | ZEISS PRISMO 5 + 7 X=700 and X=900 | ZEISS PRISMO 7 + 10 X=1200 | ZEISS PRISMO 10 X=1600 | ZEISS PRISMO 14 X=1600 |
|---|---|---|---|---|---|---|---|
| **Unidirectional length measurement error** MPE complies with ISO 10360-8:2013 | E[Uni:Tr:ODS] in sensor direction | in µm | 18 °C - 22 °C | 2.9 + L/350 | 3.5 + L/300 | 4.5 + L/250 | 5,3 + L/250 |
| **Dimension probing error** MPE complies with ISO 10360-8:2013 | P[Size.Sph.1x25:Tr:ODS] in sensor direction | in µm | 18 °C - 22 °C | 5 | 5 | 5 | 5 |

**Sensor overview**




| | VAST XT gold | VAST XTR gold [2] | ROTOS | VAST gold | ZAS | VAST XXT | ViScan | LineScan | DotScan |
|---|---|---|---|---|---|---|---|---|---|
| **Multi-point** | ■ | ■ | | ■ | | ■ | ■ | | |
| **Min. probing force** | | 50 mN | | 50 mN | | | | | |
| **Measuring rate** | | | | | | | | | |
| **Passive scanning** | | | | | | ■ | | | |
| **Active scanning** | ■ | ■ | | ■ | | | | | |
| **Optical scanning** | | | | | | | ■ | ■ | ■ |
| **Roughness measurement** | | | ■ | | | | | | |
| **Rotatable/ tiltable** | | | ■ | | ■ [6] | ■ | ■ | ■ | ■ |
| **Max. stylus length** [4] | 500 mm | 350/500 mm [5] | | 800 mm | 200 mm | 250 mm [3] | | | |
| **Max. stylus weight (incl. adapter plate)** [4] | 500 g | 500 g | | 600 g | | 15 g | | | |
| **Smallest stylus tip diameter** [4] | 0.5 mm | 0.5 mm | | 0.3 mm | 1 mm | 0.3 mm | | | |

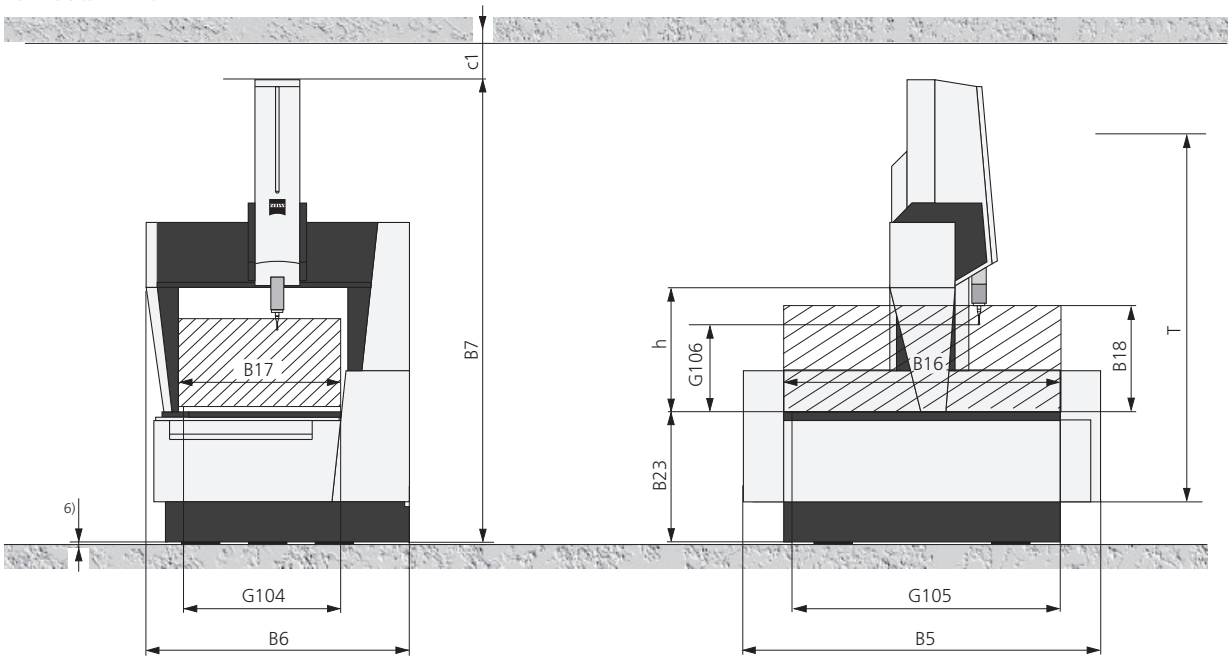
1) The use of optical probes requires calibration with a contact probe (e.g. VAST XXT).
2) Only for PRISMO - not for ZEISS PRISMO ultra
3) ZEISS VAST XXT: depending on module (TL1, TL3 or TL4).
4) Depending on the application, limiting the parameters for a stylus configuration may be useful.
5) Length ≤ 350 with rotation axis, length ≤ 500 without rotation axis
6) The ZEISS Articulating Stylus is with a rotation axis in XZ and YZ available. He has no second rotation axis.

| ZEISS PRISMO Sizes | Dimensions in mm | | | | | | | | | | | | | Weight in kg | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Measuring range | | | Overall CMM dimensions | | | Working range (max. workpiece size) | | | | Table height | Assembly space | Transport height | Machine | Workpiece |
| | X axis | Y axis | Z axis | Width | Length | Height | Width | Length | Height | Height | Height | Height | Height | | |
| | G104 | G105 | G106 [4] | B6 [10] | B5 [9] | B7 | B17 | B16 | B18 [5] | h | B23 [1] | c1 | T | | |
| **ZEISS PRISMO ultra and PRISMO fortis** | | | | | | | | | | | | | | | |
| 7/10/5 ultra | 700 | 1000 | 500 | 1541 | 2040 | 2930 | 896 | 1520 | 605 | 720 | 850 | 150 | 2560 | 3120 | 1000 |
| 7/12/7 fortis | 700 | 1200 | 650 | 1541 | 2040 | 3040 | 896 | 1520 | 705 | 820 | 850 | 150 | 2660 | 3220 | 1000 |
| 9/13/7 ultra | 900 | 1300 | 650 | 1717 | 2340 | 3040 | 1070 | 1820 | 705 | 820 | 850 | 150 | 2410 | 2950 | 1000 |
| 9/15/7 fortis | 900 | 1500 | 650 | 1717 | 2340 | 3040 | 1070 | 1820 | 705 | 820 | 850 | 150 | 2410 | 2950 | 1000 |
| 12/18/7 ultra | 1200 | 1800 | 650 | 2034 | 2940 | 3060 | 1416 | 2420 | 705 | 820 | 600 | 150 | 2660 | 6000 | 1500 |
| 12/18/10 ultra, fortis | 1200 | 1800 | 1000 | 2034 | 2940 | 3520 | 1416 | 2420 | 1079 | 1228 | 600 | 200 | 2660 | 6000 | 1500 [7] |
| 12/18/10 fortis U-stone | | | | | | 3720 | | | | 1420 | | | 2860 | 6540 | 2000 [8] |
| 12/24/10 ultra | 1200 | 2400 | 1000 | 2034 | 3540 | 3550 | 1416 | 3220 | 1079 | 1228 | 600 | 200 | 2660 | 7250 | 2000 |
| 16/24/10 ultra | 1600 | 2400 | 1000 | 2434 | 3540 | 3860 | 1700 | 3020 | 1147 | 1293 | 872 | 200 | 3050 | 13360 | 4000 |
| 16/30/10 ultra | 1600 | 3000 | 1000 | 2434 | 4140 | 3860 | 1700 | 3620 | 1147 | 1293 | 872 | 200 | 3050 | 15750 | 4000 |
| **ZEISS PRISMO (all sizes) and PRISMO verity (7/9/5, 9/15/7 and 12/18/10** | | | | | | | | | | | | | | | |
| 7/9/5 | 700 | 900 | 500 | 1552 | 1750 | 2960 | 885 | 1220 | 585 | 720 | 860 | 150 | 2210 | 1700 | 1200 |
| 7/9/7 | 700 | 900 | 650 | 1552 | 1750 | 3040 | 885 | 1220 | 695 | 820 | 860 | 150 | 2360 | 1800 | 1200 |
| 9/12/7 | 900 | 1200 | 650 | 1727 | 2050 | 3060 | 1060 | 1520 | 695 | 820 | 860 | 150 | 2360 | 2300 | 1300 |
| 9/15/7 | 900 | 1500 | 650 | 1727 | 2350 | 3060 | 1060 | 1820 | 695 | 820 | 860 | 150 | 2410 | 2950 | 1500 |
| 9/18/7 | 900 | 1800 | 650 | 1727 | 2650 | 3060 | 1060 | 2120 | 695 | 820 | 860 | 150 | 2410 | 3460 | 1500 |
| 9/24/7 | 900 | 2400 | 650 | 1727 | 3250 | 3060 | 1060 | 2720 | 695 | 820 | 860 | 150 | 2410 | 4740 | 2000 |
| 12/18/10 | 1200 | 1800 | 1000 | 2044 | 2950 | 3520 [2] | 1406 | 2420 | 1069 | 1228 | 600 [2] | 200 | 2660 | 6100 | 2000 |
| | | | | | | | | | | | | | | 6200 [3] | 5000 [3] |
| 12/24/10 | 1200 | 2400 | 1000 | 2044 | 3550 | 3520 [2] | 1406 | 3020 | 1069 | 1228 | 600 | 200 | 2660 | 7350 | 2500 |
| | | | | | | | | | | | | | | 7450 [3] | 5000 [3] |
| 12/30/10 | 1200 | 3000 | 1000 | 2044 | 4150 | 3560 | 1406 | 3620 | 1069 | 1228 | 650 | 200 | 2660 | 9600 | 3500 |
| | | | | | | | | | | | | | | 9700 [3] | 5000 [3] |
| 12/42/10 | 1200 | 4200 | 1000 | 2044 | 5350 | 3560 | 1406 | 4820 | 1069 | 1228 | 650 | 200 | 2660 | 13000 | 3500 |
| | | | | | | | | | | | | | | 13100 [3] | 5000 [3] |
| 16/24/10 | 1600 | 2400 | 1000 | 2444 | 3540 | 3860 | 1690 | 3020 | 1369 | 1515 | 650 | 200 | 3050 | 11000 | 3500 |
| | | | | | | | | | | | | | | 11100 [3] | 5000 [3] |
| 16/30/10 | 1600 | 3000 | 1000 | 2444 | 4150 | 3860 | 1690 | 3620 | 1369 | 1515 | 650 | 200 | 3050 | 13000 | 3500 |
| | | | | | | | | | | | | | | 13100 [3] | 5000 [3] |
| 16/42/10 | 1600 | 4200 | 1000 | 2444 | 5350 | 3860 | 1690 | 4820 | 1369 | 1515 | 650 | 200 | 3050 | 17000 | 3500 |
| | | | | | | | | | | | | | | 17100 [3] | 5000 [3] |
| 16/24/14 | 1600 | 2400 | 1400 | 2454 | 3540 | 4259 | 1690 | 3020 | 1369 | 1515 | 650 | 200 | 3050 | 11020 | 3500 |
| | | | | | | | | | | | | | | 11120 | 5000 [3] |
| 16/30/14 | 1600 | 3000 | 1400 | 2454 | 4150 | 4259 | 1690 | 3620 | 1369 | 1515 | 650 | 200 | 3050 | 13020 | 3500 |
| | | | | | | | | | | | | | | 13120 | 5000 [3] |
| 16/42/14 | 1600 | 4200 | 1400 | 2454 | 5340 | 4259 | 1690 | 4820 | 1369 | 1515 | 650 | 200 | 3050 | 17020 | 3500 |
| | | | | | | | | | | | | | | 17120 | 5000 [3] |

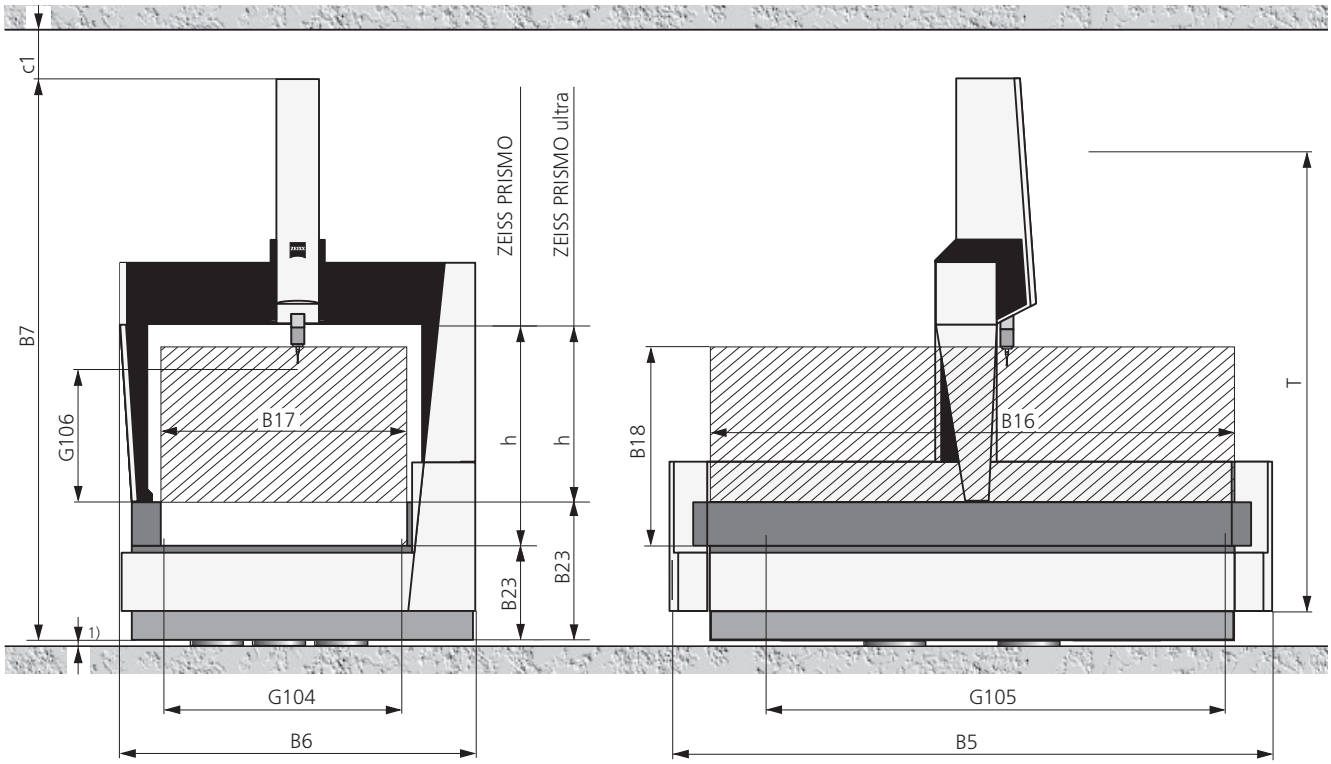
Note: the given dimensions and weights are approximate values. Subject to change. Dimensioning based on DIN 4000-167:2009.

1) Deviations from the given values can occur depending on the subsoil properties.
2) Optional table height is 830 mm with base. The total height increases by 230 mm.
3) CMM with increased permissible workpiece weight option (NSP).
4) Specifications apply to ZEISS VAST gold with a stylus length of 60 mm and tip diameter of 8 mm.
5) Specifications apply to ZEISS VAST gold without adapter plate.
6) 5, 8 or 10 mm depending on the installation (mounted or embedded steel plates). You will find more information in the installation instructions.
7) ZEISS PRISMO ultra
8) ZEISS PRISMO fortis
9) When safety laser scanners are mounted, 68 mm must be added to the dimension up to Y<2400 mm. For machines with Y>= 2400, a dimension of 136 mm must be added.
10) When safety laser scanners are mounted, 98 mm must be added to the dimension for the machine with X = 700 and X = 900 mm. For machines with X = 1200 and X = 1600 mm, 115 mm must be added to the dimension.

From 7/9/5 to 12/42/10



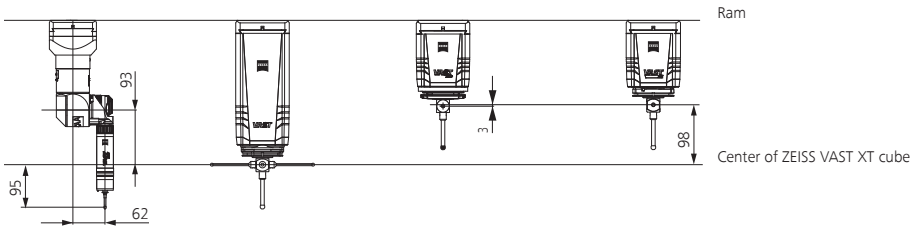

ZEISS PRISMO 12/18/10 fortis U-stone and all ZEISS PRISMO from 16/24/10 to 16/42/10




1) 5, 8 or 10 mm depending on the installation (mounted or embedded steel plates). You will find more information in the installation instructions.

**Size comparison of the sensors**

ZEISS RDS Select Basis / ZEISS VAST XXT TL 1 | ZEISS VAST gold | ZEISS VAST XTR gold | VAST XT gold




Note: the given dimensions and weights are approximate values. Subject to change. Dimensioning based on DIN 4000-167:2009.

**Technical features**

| | | | | | | |
|---|---|---|---|---|---|---|
| **Controller** | Type | ZEISS C99m with USS 2.1 wiring | | | | |
| | Protection type | IP54 | | | | |
| | Chiller | Fan | | | | |
| **Accessories (optional)** | Increased permissible workpiece weight, various controllers, multi-sensor rack, rotary table, form inspection package (PRISMO ultra) | | | | | |
| **Scales** | ZERODUR on ZEISS PRISMO ultra, ZEISS PRISMO verity and PRISMO fortis,<br>Glass ceramic on ZEISS PRISMO. For Y >2400, steel scales (on ZEISS PRISMO) and automatic temperature capture are used. | | | | | |
| **Resolution** | 0.02 µm for ZEISS PRISMO ultra, 0.08 µm ZEISS PRISMO verity and PRISMO fortis, 0.2 µm for ZEISS PRISMO | | | | | |

**Ambient requirements**

Temperature conditions to guarantee specified accuracy

| | | **ZEISS PRISMO** | | | | |
|---|---|---|---|---|---|---|
| | | X=700 and 900 | | X=1200 | X=1600 | X=1200 and 1600 |
| **Measuring reference temperature from** | | 19°C - 21°C | 15°C - 30°C | 18°C - 22°C | 18°C - 22°C | 18°C - 28°C [1] |
| | Per day | 1.8 K/d | 5 K/d | 1.8 K/d | 2 K/d | 5 K/d |
| | Per hour | 0.8 K/h | 2 K/h | 0.8 K/h | 1 K/h | 2 K/h |
| | Spatial | 0.8 K/m | 1 K/m | 0.8 K/m | 1 K/m | 1 K/m |

| | | **ZEISS PRISMO fortis** | **ZEISS PRISMO verity** | **ZEISS PRISMO ultra** |
|---|---|---|---|---|
| **Measuring reference temperature from** | | 15°C - 40°C | 19°C - 22°C | 20°C - 22°C |
| | Per day | 5 K/d | 2 K/d | 1 K/d |
| | Per hour | 2 K/h | 1 K/h | 0.5 K/h |
| | Spatial | 1 K/m | 0.5 K/m | 0.5 K/m |

| | |
|---|---|
| **Floor vibrations** | The ZEISS PRISMO ultra and PRISMO fortis are equipped with active vibration damping.<br>The ZEISS PRISMO and PRISMO verity are equipped with a vibration damping system featuring elastomer/viscous supports.<br>Limiting curves also available. We can also conduct a vibration analysis upon request. |

**Requirements for operational readiness**

| | |
|---|---|
| **Relative humidity** | 40% to 70% (without condensation) |
| **Ambient temperature** | 15°C - 35°C, 15°C - 40°C for PRISMO fortis |
| **Power rating** | 1/N/PE 100/110/115/120/125/230/240 V ~ (±10%); 50-60 Hz (±3.5%)<br>Max. power consumption: 2500 VA<br>Typical power consumption: 280 W<br>Amount of heat generated: max. 7000 kJ/h |
| **Compressed air supply** | Supply pressure min. 6 bar, max. 10 bar, pre-cleaned. Consumption approx. 50 Nl/min. Air quality complies with ISO 8573, part 1: class 4.<br>The use of the AirSaver included with delivery ensures that compressed air is not used during ZEISS PRISMO downtime, thus enabling environmentally friendly operation and saving resources. |

**Approvals**

| | |
|---|---|
| **Directives** | ZEISS PRISMO complies with EC machine directive 2006/42/EC, the EMC directive 2014/30/EU and the RoHS directive 2011/65/EU. |
| **Disposal** | ZEISS products and packaging returned to us are disposed of in accordance with applicable legal provisions. |

**Certification/accreditation**

| | |
|---|---|
| **Quality management system** | ISO 9001:2015 |
| **Environmental management system** | ISO 14001:2015 |
| **Occupational safety management system** | ISO 45001:2018 |
| **Accredited** | ISO/IEC 17025 |

1) ZEISS PRISMO 10 (Y >2400) 18°C-24°C with gradient: 1.8 K/d, 0.8 K/h, 0.8 K/m.

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