

**When Precision Matters the Most**  
ZEISS PRISMO Family



Total Metrology Solutions

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# ZEISS PRISMO Family

## A growing family - a recognized reference

Over the last 25 years ZEISS PRISMO has become synonymous around the world for high-speed scanning and maximum accuracy in and outside the measuring lab. PRISMO from ZEISS is a reference in precision measurement and follows the ISO quality standards entirely. An essential in a world where precision matters the most and compromises on accuracy are not acceptable.

Besides the aspiration of not accepting compromises when it comes to precision, **ZEISS PRISMO** stands for accuracy, reliability, flexibility and long-term stability. **ZEISS PRISMO fortis** delivers reliable measurements in the toughest conditions, even at temperatures of up to 40 °C. Enabling to perform measurements next to the production line, saving time and costs. **ZEISS PRISMO verity** further increases the accuracy of ZEISS PRISMO, as it's equipped with features from ZEISS PRISMO ultra. With the specification of  $0.5 + L/500 \mu\text{m}$  **ZEISS PRISMO ultra** represents the most accurate machine of the ZEISS PRISMO family.



## ZEISS PRISMO Family at a glance

### ZEISS PRISMO

#### Best Results Guaranteed

Computer-Aided Accuracy (CAA) ensures corrections of all dynamic influences on the machine to optimize precision for high-speed scanning.

#### Highest Productivity Guaranteed

The FlyScan and QuickChange technologies in the Performance Package ensure maximum productivity by shortening the travel path, resulting in time savings of up to 40% an accelerating the automatic change out of measuring styli by up to 60%.

#### Maximum Application Flexibility

ZEISS PRISMO comes standard with the multi application sensor system (mass) from ZEISS. mass enables both tactile and optical measurement on the same machine.

#### Time & Cost Savings

Due to ZEISS Articulating Stylus for ZEISS VAST gold enables variable angular positions continuously, resulting in increasing flexibility, cost and time reduction.

#### Extended Applications

In addition to size, location and form measurement, with ZEISS ROTOS roughness and waviness measurements are possible with one coordinate measuring machine.

### ZEISS PRISMO verity



#### Even More Precise Measuring Results

Improved accuracy of  $0,7+L/400 \mu\text{m}$  due to knowledge transfer from ZEISS PRISMO ultra in form of

- ZERODUR® scales
- Most precisely assembly, installation and acceptance process

#### Top Performance

With improved form measurement values ZEISS PRISMO verity is the best machine in its class:

- Performance indicator:  $\text{MPE\_THP} = 0.9 \mu\text{m}$  in  $\text{MPT\_tau} = 40 \text{ s}$
- Form accuracy indicator:  $\text{MPE\_RONT} 0.7 \mu\text{m}$

#### Stable Accuracy Guaranteed

The high accuracy of the ZEISS PRISMO verity even meets the requirements of the German VDI/VDE 2627 standard for "Measurement room class 3". An air conditioned chamber with temperatures between 19 °C to 22 °C is suitable for all your measuring needs.

#### High Resolution with ZERODUR® Scales

Floating ZERODUR® scales with 80 nm resolution eliminate the influence from temperature gradients on the accuracy without additional temperature sensors.

### ZEISS PRISMO ultra

#### Highest Level of Accuracy & Reproducibility

Highest precision is guaranteed through a stricter matching of all machine parts and improved features:

- ZERODUR® scales with resolution of 20 nm
- Improved air bearings
- Active pneumatic damping system
- Thermal bending compensation of the granite plate
- Protection against thermal radiation from the floor

#### Excellent Results Guaranteed

Maximum precision is achieved with enhanced CAA methods such as bending of the calibration sphere, improved tensor calibration and dedicated CAA-corrections for RT-measurements guarantee highest level of precision for form measurement tasks.

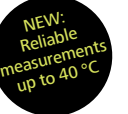
#### Form Measurement with Guaranteed Quality

The optional RT-AB select enables form measurement on ZEISS PRISMO ultra, which guarantees the calibrated value of a ring gauge better or equal to  $0.2 \mu\text{m}$ ! These values have been confirmed in collaboration with a well-known German institute. Following the golden rule measurements of form tolerances from 2-3  $\mu\text{m}$  are guaranteed.

#### ZEISS Takes Responsibility for your Satisfaction with Individualized Installation Process

To keep this promise, ZEISS completes a precision verification after installation later performs an acceptance test by highly qualified service engineers.

### ZEISS PRISMO fortis



#### Maximum Temperature Gradient 40 °C

Due to optimized air bearing integration, floating mounted ZERODUR® scales and thermal bending corrections, hardware stability and highest accuracy up to 40 °C are guaranteed.

#### High Precision Outside the Quality Lab

ZEISS PRISMO fortis can be integrated in the production without additional investments in an air-conditioned measuring room.

#### Driving the automation forward

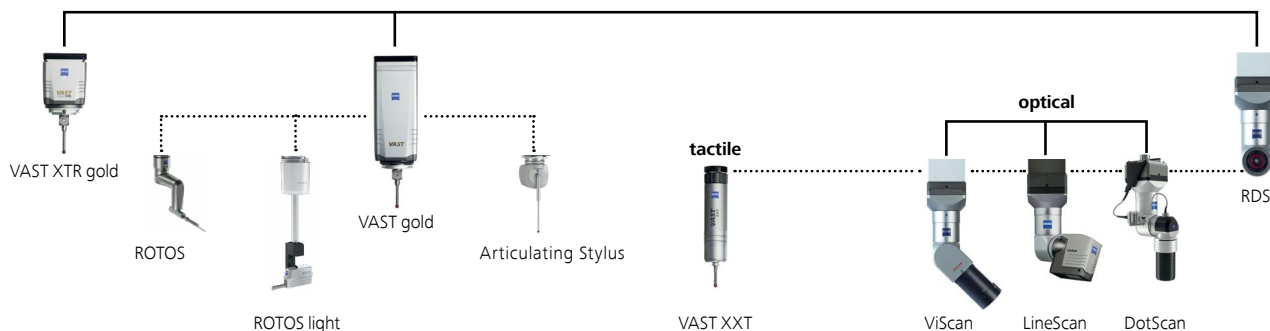
ZEISS PRISMO fortis meets the requirement for robust automated coordinate measuring machines for quality inspection at the production line. With an optional automated loading system, ZEISS PRISMO fortis ensures optimum productivity along with maximum precision.

Additionally, in order to the measuring volume efficiently, it is possible to order the ZEISS PRISMO fortis granite with a "U-Stone" option.

# Maximum Application Flexibility

## ZEISS mass

ZEISS PRISMO comes standard with the multi application sensor system (mass) from ZEISS. mass enables both tactile and optical measuring on the same machine. Sensors can be exchanged in just a few steps thanks to the common interface for all sensors.



# Maximum Speed and Agility

## Performance Accelerators



### ZEISS VAST Navigator Technology

Automatically configures the maximum measuring speed for scanning with guaranteed accuracy.



### ZEISS CALYPSO VAST Probing

With CALYPSO VAST Probing the time of the single point measuring can be reduced significantly with adequate accuracy, resulting in measurement time reduction of up to 25 %.



### ZEISS Articulating Stylus

The articulating stylus for ZEISS VAST gold is as a flexible performer, a brilliant complement for the ZEISS PRISMO Family. The innovative stylus with continuous variable angle positions is ideal for measuring tasks where different stylus orientations are required by the application. ZEISS Articulating Stylus combines flexibility with the performance characteristics of ZEISS VAST gold.



### ZEISS CALYPSO pallet optimizer

By changing the measurement strategy with a pallet system, from the traditional "one probe at a time" method to the "feature by feature, complete pallet at once" method, a significantly reduced measuring time is achieved, resulting in greater efficiency and cost savings.

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