

# PRISMO navigator®.



- For high productivity

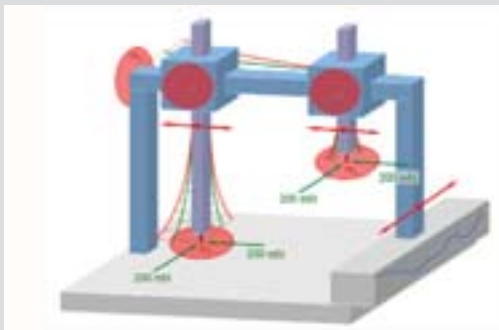


We make it visible.

# PRISMO - The world's leader in high-speed scanning

With PRISMO, all machine components are optimally designed. High accuracy, speed and outstanding resistance to ambient conditions make PRISMO fast and accurate. It is not by chance that PRISMO sets the global standard for high-speed scanning in production.

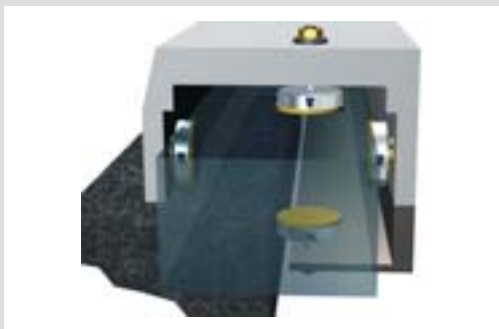
## Machine strategy



The precise result as fast as possible

- All components support maximum precision during high-speed scanning
- CAA (Computer Aided Accuracy) for computer-aided error correction of the kinematics
- Also suitable for use on the shop floor
- ISC control provides high reliability and optimal controller action
- With VAST Navigator, measuring times are reduced to the absolute minimum

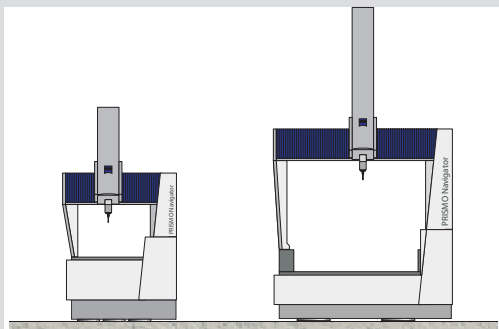
## Machine technology



Bridge-type measuring machine for absolute peak performance

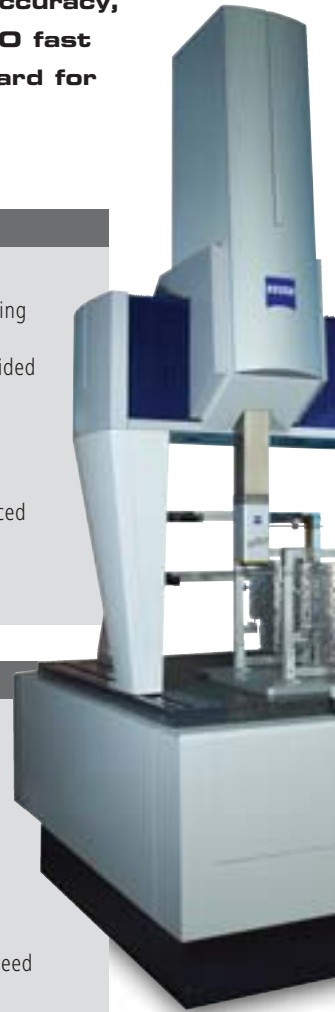
- Extremely rigid bridge, laterally driven
- Air bearings on all 4 axes
- Table covers and fully enclosed X axis and Y drive axis
- Zerodur scales
- Integrated elastomer vibration damping
- VAST Navigator technology ensures very high speed
- In-house development of all function-related components ensures optimum performance

## Measuring range



Different machine sizes cover a wide range of measuring volumes

- Z measuring range from 500 to 1000 mm
- Bridge widths from 700 to 1200 mm
- Y axis from 900 to 4200 mm
- Measuring range position, working surface, large bridge working area and the permissible styli extensions ensure optimal use of the measuring range



## Sensor system

VAST Universal Probe Head with Navigator technology including stylus rack

- Unparalleled when the form must be recorded in addition to size and position
- For multi-point and single-point measuring
- Adjusts to practically every measuring task with maximum accuracy and speed



## Operation

Computer-independent standard control panel

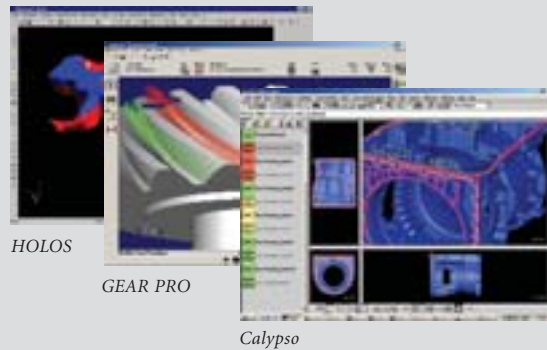
- For manual control with joystick at a remote location
- Overdrive for speed control in CNC operations



## Software

Functional and user-friendly Zeiss software library

- Object-optimized programming
- Basic package and options cover practically all application requirements
- Navigator function enables automatic generation of measurement strategies
- Graphical configuration and statistics output



## Precision

PRISMO works even more precisely with the HTG and S-ACC upgrade packages

- Equipped with HTG, the linear measuring tolerance for PRISMO 5 and 7 at 18 – 22 °C is 1.4 + L/333 and at 15 – 30 °C is 1.9 + L/300 (MPE in accordance with DIN EN ISO 10360-2)
- With S-ACC, the linear measuring tolerance for PRISMO 5 and 7 at 19 – 21 °C is 0.9 + L/350 (MPE in accordance with DIN EN ISO 10360-2)



# PRISMO - always a step ahead with Navigator technology

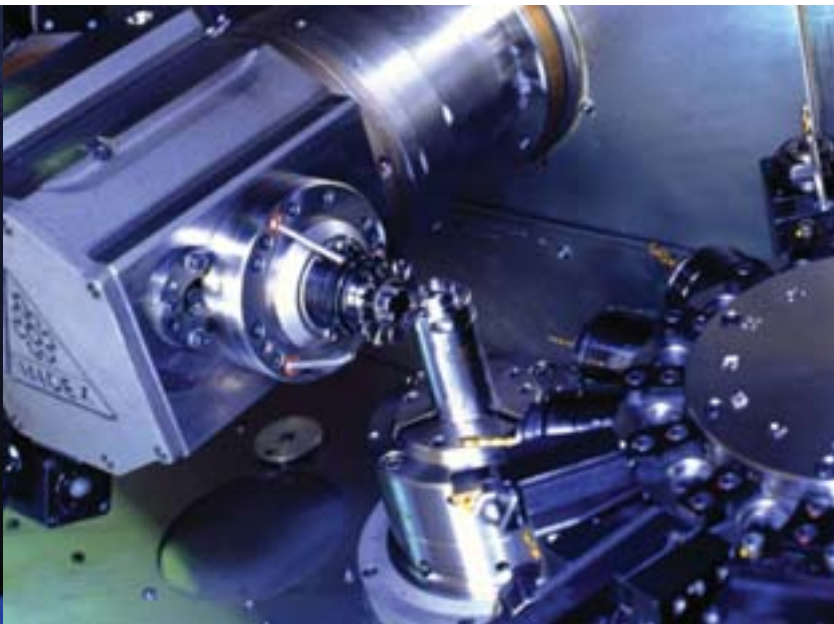


**When PRISMO was designed, the interaction of its component was optimized to provide reliable speed and precision for a variety of measuring needs. Curves, freeform surfaces or gears - the VAST Universal Probe Head for multi-point or single-point measuring flexibly adapts to each measuring task. The integrated Navigator technology ensures higher productivity with more accuracy. PRISMO delivers peak performance to the production environment. Productivity you can rely on.**

## Fast and accurate

- The VAST Universal Probe Head with Navigator technology ensures an optimum combination of maximum speed and accuracy with each task.
- Optimum isolation against vibrations, covered guideways and scales, and the universal use of materials resistant to temperature fluctuations make PRISMO resistant to harsh production environments. That is why PRISMO is the ideal solution for use in the workshop.
- Dynamic CAA to correct dynamic deformations on the machine mechanics caused by accelerations during measurements. Only from Carl Zeiss!





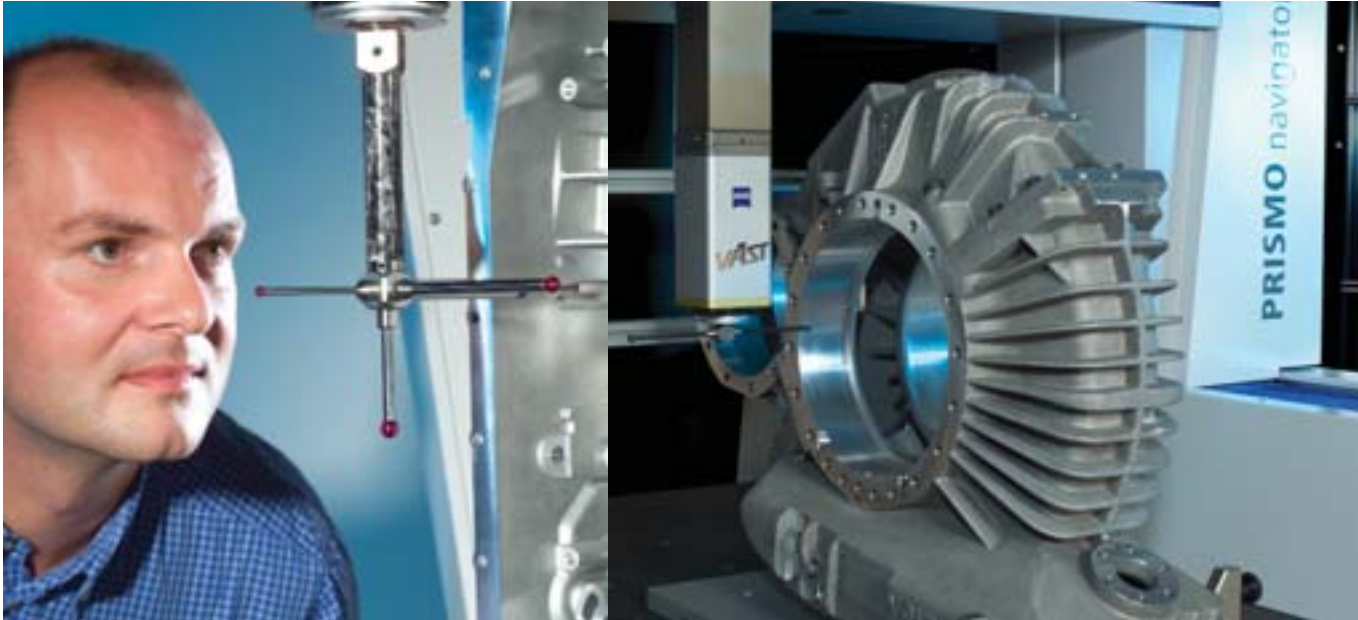
### **Reduce production costs**

- The basic version of PRISMO delivers maximum precision, speed and resistance to ambient conditions – it is designed for fast and accurate measuring results.
- In addition to a fully-enclosed X axis, the PRISMO table is also completely enclosed, minimizing the maintenance and repair costs while simultaneously increasing operational safety.
- Teleservice increases machine availability. It not only provides technical assistance, but also applications support and software updates quickly and efficiently.

### **Improve production quality**

- VAST allows you to very quickly measure size, form and position in one run! No mechanical aligning, no re-clamping, no inaccuracies. Retrofits and idle times are reduced to a minimum, ensuring that highly accurate measuring results are available quickly.
- With Navigator technology, PRISMO can even quickly complete complicated measuring tasks without a loss of accuracy.

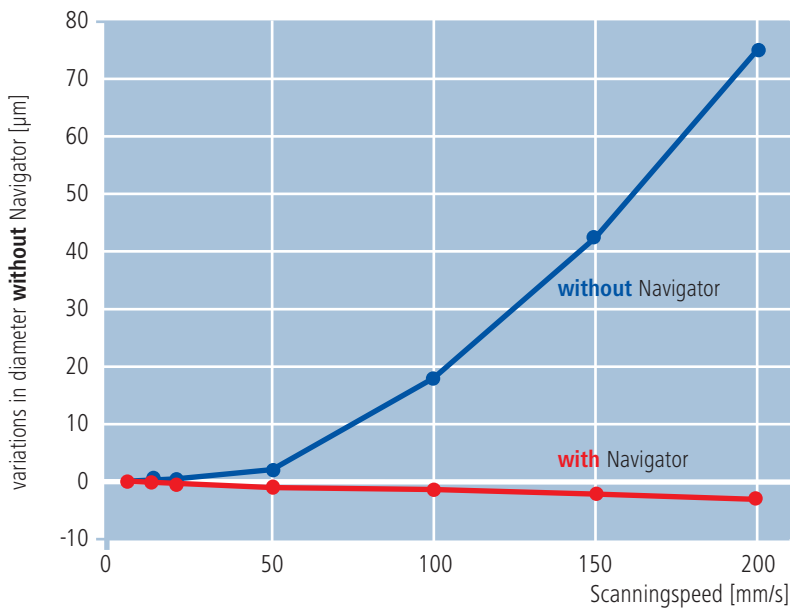
# PRISMO - First Class all the way



**The performance of a CMM is directly related to its technical design. PRISMO provides advanced Carl Zeiss technology beginning with the standard model. With the VAST Universal Probe Head with navigator technology, the speed and accuracy of PRISMO are unparalleled. The ISC controller provides PRISMO with maximum reliability and optimum controller action. All materials used are thermally stable, making PRISMO resistant to ambient conditions.**

### Design features

- The combination of carbon fiber composites and ceramic in the bridge assembly reduce the weight of PRISMO without compromising rigidity. This ensures optimum precision and reliably reproducible results even at high measuring speeds.
- Ceramic is thermally stable meaning that temperature fluctuations have practically no influence on the reliability of the results.
- Measuring range position, working surface, large bridge opening and the permissible styli extensions ensure optimal use of the measuring range.
- All axes are equipped with 4-sided Carl Zeiss air bearings to provide more stability and a highly precise measurement.



## Features

- With the VAST Universal Probe Head and integrated Navigator technology, PRISMO is ideal for high-speed scanning. Probe joints are designed to ensure higher rigidity and enable the use of stylus extensions up to 800 mm.
- PRISMO is available in different sizes and configurations – for a wide range of parts, measuring tasks and production conditions.
- The integrated ISC controller ensures real-time, dynamic full correction of the machine and stylus, thus guaranteeing high reliability and optimum controller movement.
- The newly developed Multi Sensor Rack MSR can be equipped with all applicable sensor and probe holder magazines.

## Upgrade levels

- With the HTG, the optimum temperature range increases to 15 – 30 °C, making PRISMO even less demanding on ambient conditions.
- PRISMO S-ACC, the top-of-the-line model for maximum precision, achieves measurement uncertainty of an amazing  $K1 = 0.9 \mu\text{m}$  maximum accuracy in precision cutting. PRISMO S-ACC provides maximum precision and process stability with short measuring times for ever narrower tolerances, particularly those in the automotive industry.
- PRISMO can also be operated with RDS-CAA correction for automatic calibration for all 20,736 angular positions with few measuring points for single-point touch sensors in the rotation/swivel range of  $\pm 180^\circ$  and an automatic switchable probe head pallet.

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