ECLIPSE
Your first inexpensive step into production measuring technology
ECLIPSE.
Economical measuring technology from Carl Zeiss.

Carl Zeiss - 150 years of experience in optics, precision engineering and electronics.

Carl Zeiss has a 150-year-old tradition of innovation. As a pioneer in optics, precision engineering and electronics, we continue to set standards in technology for a wide range of products.

Commitment to quality, service and innovation.

Zeiss CMMs are manufactured in our ISO 9001 certified production facilities in Germany and the United States.

With an open ear for the requirements of the market and in close cooperation with our customers we are offering a well-balanced spectrum of technically matured products for all fields of industrial measuring technology.

Our closely-knit service and sales network provides fast reaction times in response to our customers' requirements.

Carl Zeiss coordinate measuring machines are manufactured in our ISO 9001 certified facilities in Germany and the US.
ECLIPSE is a highly economical coordinate measuring machine for verifying your quality.

Small footprint.
Different sizes.
Wide range of sensors.
Great software variety.

For use in your production environment and tool shop, in the receiving department and final inspection.

For large and small parts, whether they are made of metal or plastic.

For production screening or individual workpiece inspection.

For pallet measurement also of different parts in several, unmanned shifts.

With more than 1000 ECLIPSE CMMs sold around the globe we have proof that ECLIPSE remains stable and operates reliably for years and years in your production environment.
**ECLIPSE.**
*Designed for optimized stability and accuracy.*

**Ceramic material for stability.**

ECLIPSE’s accuracy is guaranteed over a wide temperature range from 18 °C to 22 °C. The vital guideways (cross beam and quill) are made of non-porous ceramic material which is virtually insensitive to temperature fluctuations, humidity and contamination.

**Zeiss accuracy.**

ECLIPSE features computer aided accuracy, which means it operates with the same CAA techniques as our ultra-high accuracy CMMs. CAA compensates for mechanical residual errors without the need for mechanical alignment and therefore provides lasting, consistent accuracy. The measuring uncertainty is tested at maximum acceleration and measuring speed, including the "Y left down" position, which tends to be more error-prone. Each ECLIPSE CMM is certified to ISO 10360-2 and VDI/VDE 2617 standards.

Non-porous ceramic material in the X and Z axes guarantees stability and rigidity and makes the machine ideal for parts of any size and shape, made of any material.

**Quality components and modern production for a sturdy design.**

ECLIPSE combines high-quality Zeiss components with state-of-the-art manufacturing techniques. The patented Zeiss air bearings on all four sides of the Y-guideway and the light ceramic material used in the cross beam and the quill provide additional rigidity and stability. Friction-wheel drives allow high acceleration and speed in the CNC mode.

Accuracy is verified at maximum measuring speed and certified to ISO 10360-2 and VDI/VDE 2617 standards.
ECLIPSE.

Designed for long-term stability and ergonomic operation.

Reliable, long-term operation.

All key components of ECLIPSE are tested before being assembled. A fatigue test on completion of the assembly ensures trouble-free, reliable operation. Your guarantee that you can measure with the same speed and accuracy for years to come.

Small footprint.

In relation to its measuring volume, ECLIPSE takes up amazingly little space and will therefore fit smoothly into your production line. This was made possible by integrating the controller into the machine base. External cabling is reduced for the benefit of the operator and the machine, and the footprint made even smaller.

Ergonomic operator panel.

ECLIPSE comes with an ergonomically designed operator panel. Two joysticks make control, programming work and movement in three axes extremely easy.

A variable speed control permits the measuring speed to be reduced, for example when performing CNC runs for checking the collision hazard and error-free operation.

Economical and future-proof

Modern components and materials and an ergonomic design proving long-term stability are your guarantee that ECLIPSE safeguards your investment over a long period of time – while at the same time reducing maintenance and re-adjustment costs.
The hallmark of the 3D touch trigger probe head is fast, accurate single-point data acquisition, eliminating stylus bending and hysteresis. Its rugged, hard-wearing design goes together with high sensitivity, it is constant in all directions and therefore direction-independent.

Patented dual probing principle: The probing pulse is generated following the slightest contact with the workpiece, with a probing force totaling less than 0.01 N. Only then is the probe head deflected mechanically. It is not before both conditions have been fulfilled, that data is captured.

The fact that heavy and long styli can be mounted allows the use of complex probing configurations.

A probe changing system allows uninterrupted, multi-shift operation in the CNC mode, with different parts which can be loaded automatically.

A virtually force-free probing pulse is followed by the mechanical deflection: the basis for successful workpiece probing.

Zeiss sensor systems – tailored to your measuring applications.
**RDS with RST.**

The RDS rotary dynamic sensor has two axes of rotation, each with a range of ±180°. Angular increments as small as 2.5° allow the RDS to reach 20,736 positions with an accuracy of ±1 sec – enough to ensure shaft-free probing of deep, sloped boreholes. Workpieces can be measured without complicated probe combinations using just one single stylus.

In conjunction with the direction-independent RST probe head, extensions as long as 300 mm and probes up to 90 mm in length can be mounted. The RST uses the same dual probing principle as the ST-ATAC and is therefore independent of the probing position and orientation.

![Diagram of RDS/RST and Conventional indexing](image)

The RDS can reach 20,736 positions. Other articulating probe holder only reach 720 positions (180°/115° with angular increments of 7.5°).

**Powerful software: Just measuring is not enough!**

**Today, you have the right to expect the best of modern measuring software.**

The Zeiss measuring library
- links up all areas of product creation: development, design, construction, trial, production, quality control ...
- uses the same data base in all areas
- provides a solution for any measuring application
- is based on modern hardware platforms under Windows NT and UNIX
- operates interactively with CAD
- has networking, multi-user and multi-tasking capabilities
- supports process-oriented production
- generates complex measuring runs automatically
- makes your processes reliable due to statistics functions and data feedback to your production department

And last but not least:
- The Zeiss measuring software guides you through your metrology work using sophisticated menu prompting and programming logic.
Our production facilities for coordinate measuring machines:

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