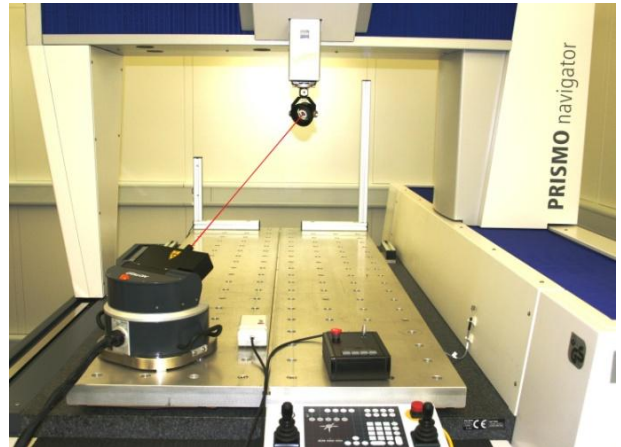
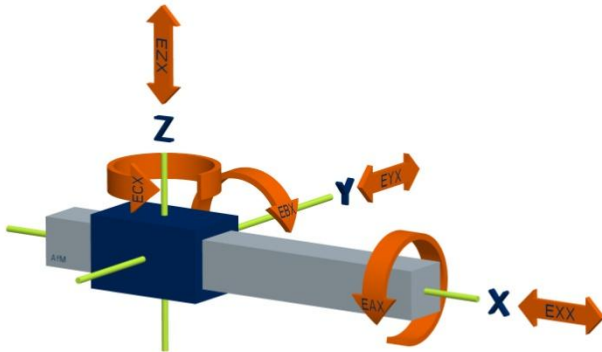


Volumetric Compensation of Coordinate Measuring Machines (CMM)

Don't be satisfied with less!



Customers

Our customers are CMM builders, CMM retrofit companies and calibration labs, using CMM's.

State-of-the-art

Today, the volumetric correction of CMMs is a must, in order to achieve small geometric deviations of the CMM. Laser interferometers, but also electronic levels and additionally straightness artefacts are in use, to map all possible 21 deviation parameters in a cartesian coordinate system.

Innovation

With LaserTRACER Systems we are measuring the volumetric deviation in the whole measuring volume of the Coordinate Measuring Machine (CMM).

The 21 deviation parameters of the CMM geometry will be mapped and evaluated in very short time, by using only one measuring device, the LaserTRACER.

The evaluation routine follows the multilateration principle (similar to the „GPS-System“)

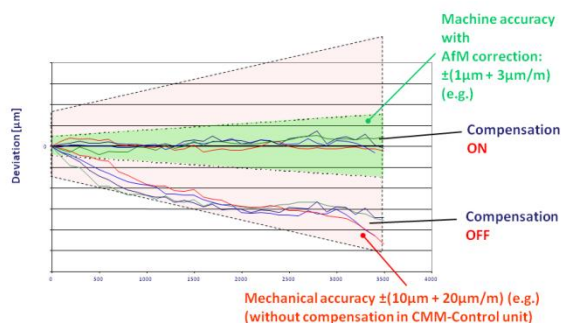
The evaluation will be given as a protocol with diagrams for the actual state of each of the systematic deviations – such as: Position, straightness, squareness, yaw, pitch and roll deviation of the axes.

The correctness of the compensation will be verified by measuring ball plates or step gauges acc. to DIN EN ISO 10360 resp. VDI/VDE 2617 .

Your Advantages

- Faster error mapping of the geometric deviations reduces down time
- Cost reduction by the use of only one measuring system for all 21 deviation parameters
- Verification test of the compensation is conform to ISO 10360 resp. VDI/VDE 2617
- Usually no mechanical correction of the CMM is necessary

Volumetric Compensation of Coordinate Measuring Machines



Use of the most up to date laser technology

- Automated self-tracking Laser interferometer with temperature stable construction
- Highest accuracy by patented (PTB, NPL) reference sphere
- No complicated fine alignment on the CMM
- 4 - 6 measuring positions in the measuring volume of the CMM for the evaluation of the complete volumetric deviation are required
- Total time : approx. 4 - 6 hours
- Resolution: 0,001 μm
- Accuracy: 0,2 μm + 0,3 $\mu\text{m}/\text{m}$
- Range: 0,2 m – 15 m
(extendable by mathematical superposition)
- Principle: Multilateration

Our Services

- Fast, cost-effective, volumetric analysis of the geometrical deviations of the CMM
- Documentation of the actual conditions
- Creation of Compensation files for various CMM-controllers
- Verification test acc. to DIN EN ISO 10360 resp. VDI/VDE 2617
- Training for LaserTRACER Systems
- Sale of LaserTRACER Systems and accessories

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Accuracy for Machines

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