

SERVICE Precision

The digital photogrammetry system is a handy and transportable measuring system that is also powerful and highly accurate. It uses digital image processing methods for determining 3D coordinates of the measurement points.

Photogrammetry

The object to be checked is marked with target marks and certified scales. All areas to be captured are photographed freely by hand from various directions.

Using the principle of spatial triangulation, the digital measurement images are processed and the 3D coordinates of the relevant object points calculated. The image evaluation and data analysis are normally carried out, dependent on the number of images taken, within minutes directly on location.



*Example of a deformation
analysis*

Photogrammetry

The accuracy of the digital photogrammetry system is up to +/- 0.01 mm, depending on the object size and image-taking configuration.

This measurement process is used for objects of different sizes, difficult-to-access objects, measurement of steel structures, deformation measurements, for example for crash tests and checking calibration equipment.

A complex pre-calibration of the photogrammetry system is not necessary, as the calibration data are determined automatically during the measurement evaluation. In addition to the 3D coordinates of the points relevant to the geometry, the system also provides comprehensive statistical analysis of the results with accuracy information for each individual value. In this way, the user has the possibility to directly evaluate the measurement results.

Advantages

- Light measuring equipment
- Object is not touched during the measurement
- Simultaneous measurement of hundreds of points allows the recording of object movement
- High accuracy: up to 1/100mm oder 1:200,000 of the object size
- Very flexible and economical operation
- Fast evaluation of results
- Tabluar and graphical display of measured values and deviations

Calibration of an intrinsic test device

System components

- High-resolution digital camera
- Highly precise, distortion-free, certified scales
- Retro-reflective target marks with ring code
- Software package with bundle adjustment and geometry check

