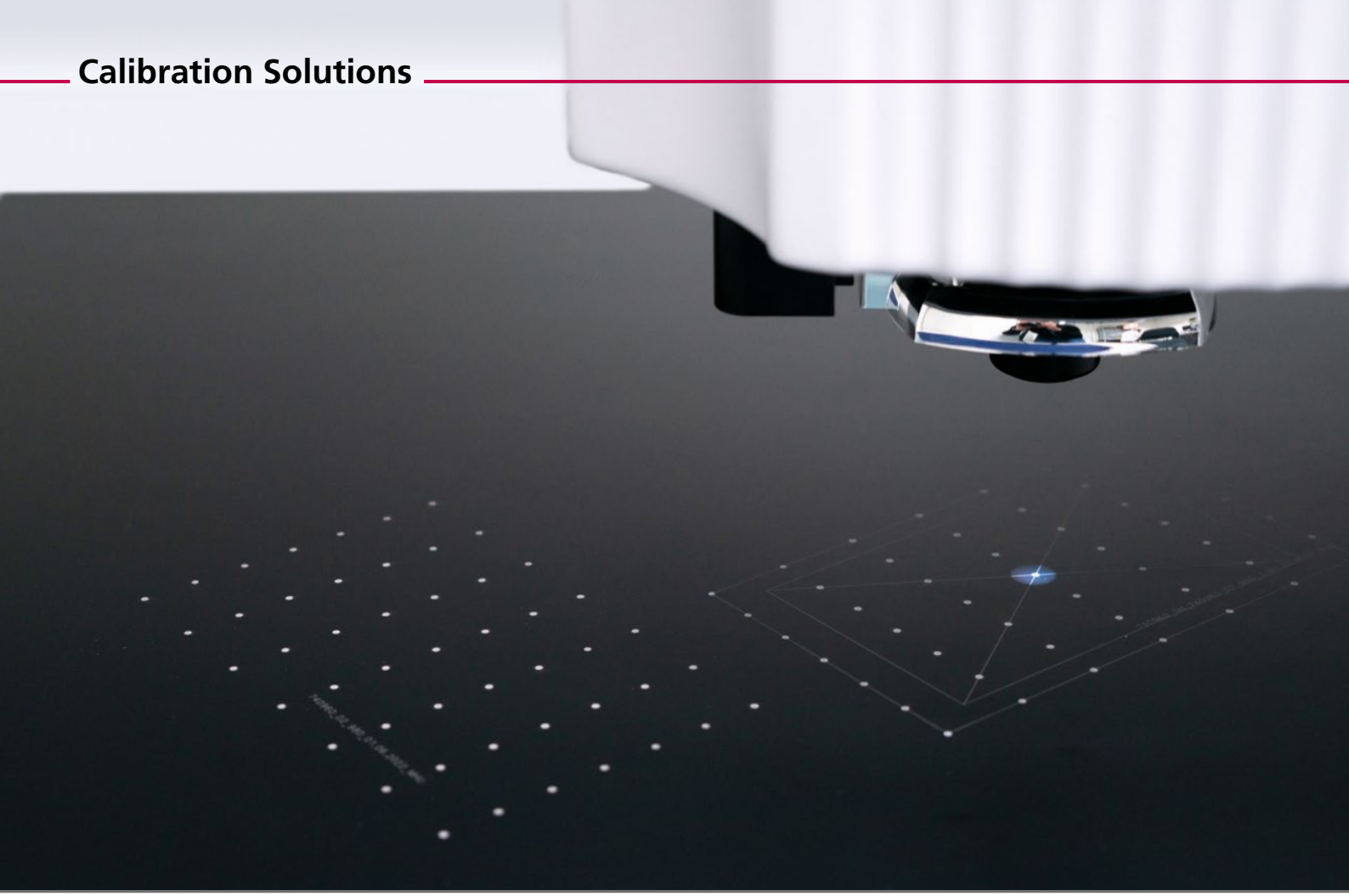


Optimal Solution for Your Calibration Workflow

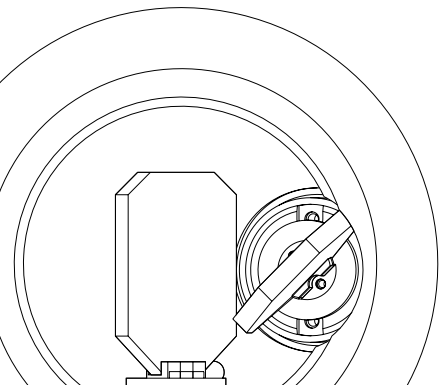
2D or 3D scan systems (with or without an F-Theta objective) produce a characteristically distorted image field. This is particularly noticeable when marking repetitive, large-area grid patterns. Pre-calculated RTC standard correction files compensate the field distortion, if the scan system is used in conjunction with an RTC control board.

RTC standard correction files don't take system-specific properties into account. For applications requiring highest accuracy, special software solutions are available to create system-specific correction files.

Our calibration solutions

- RTC standard correction file
- correXion pro
- laserDESK 3D calibration wizard
- CalibrationLibrary

More information about calibration solutions



SCANLAB
innovators for industry

Calibration of Scan Systems

Starting Point

RTC Standard Correction File

- Calculated in advance, based on simulated data
- System-specific properties not considered
- Accuracy: < 150 µm at f = 163 mm

Calibration Process

General Procedure

1. Load RTC standard correction file or an already adapted correction file.
2. Mark test pattern.
3. Determine current positions of the test points (2D systems) or the spot quality (3D systems).
4. Create new correction file.

Required Tools

- Coordinate measuring machine or other measuring equipment (influences the accuracy)
- Marking software (not necessary when using laserDESK)

Accuracy and Influencing Factors

< 20 µm at f = 163 mm

depending on

- Choice of measuring equipment
- Quality of marking

Supporting SCANLAB Software

correXion pro

- For 2D systems
- Software with GUI

laserDESK 3D Calibration Wizard

- For 2D and 3D systems
- Software with GUI and help wizard
- Executes the control of the test patterns independently

CalibrationLibrary

- For 2D and 3D systems
- Programming interface (API) with functions for complete calibration

Result

System Specific RTC Correction File

Improves the accuracy of the scan system

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