

# TRAC-CHECK

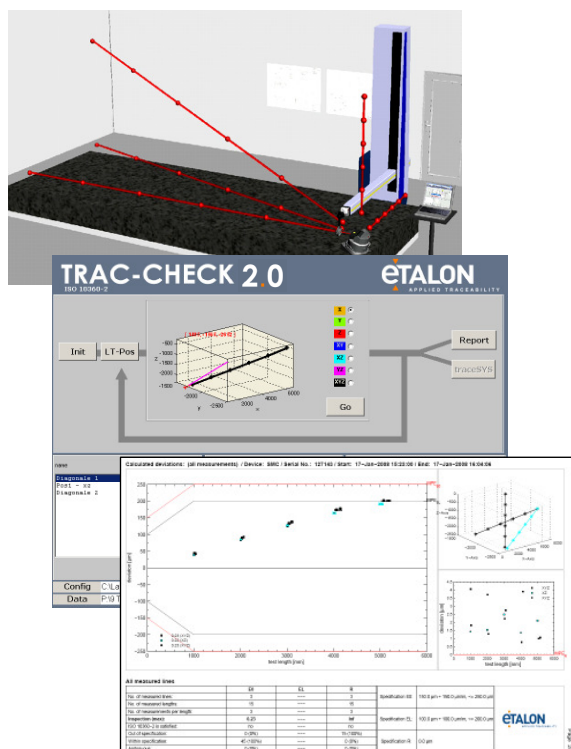
## ▶ TESTING OF CMM AND MACHINE TOOLS ACCORDING TO STANDARDS

### TESTING OF THE GEOMETRY OF MEASURING MACHINES AND MACHINE TOOLS IN 30 MINUTES

TRAC-CHECK is a patented method by which the machine geometry can be tested in record time using the ETALON LaserTRACER or a conventional laser-tracker (Leica, Faro).

### THE APPLICATION

The LaserTRACER is positioned without a precise alignment in a corner of the machine volume. A reflector is mounted to the tool or probe fixture of the machine. The laser interferometer of the LaserTRACER automatically tracks the reflector. After a few machine positions for orientation the exact position of the LaserTRACER is registered by TRAC-CHECK. The software automatically calculates and proposes in a graphical user interface the lines that can be measured from this position according to the standard. Lines parallel to the axes, plane and space diagonals: Just by single mouse clicks the entire measuring volume is tested!



- ▶ AUTOMATICLY GENERATED LINES
- ▶ CLEARLY ARRANGED TRAC-CHECK-WINDOW
- ▶ REPORT FUNCTIONS

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## WHY TRAC-CHECK?

The application of ISO 10360 and VDI/VDE 2617 or ISO 230-2 and -6 for the performance testing confronts the user with an unsatisfactory situation regarding the artefacts for geometry testing. For high accuracy machines the available calibration uncertainties are often not adequate and especially for large machines the requirement to cover 66 % of the measurement line is almost impossible to realize.

In the new revision of ISO 10360-2 the use of laser interferometers is explicitly allowed.

Therefore Etalon offers a patented system that makes the testing of machines possible in record time by the use of the LaserTRACER or a laser tracker.

## THE PRINCIPLE

The LaserTRACER is positioned freehand in a corner of the machine and the beam is locked in to the reflector mounted on the probing or tool system. After a few positions have been registered by the system our software automatically calculates the exact position of the LaserTRACER and proposes in a graphical user interface the lines that can be measured from this position according to the standard. Lines parallel to the axes, plane and space diagonals: Just by single mouse clicks! The path of the machine is automatically calculated and the entire measuring volume can be tested!

The measurement report summarizes the results of all measuring lines from different positions and performs an evaluation according to current standards. Thereby, test uncertainties are automatically considered!

## YOUR ADVANTAGES

- ▶ Fast: A full geometry check can be performed in 30 minutes
- ▶ Very easy handling: No alignment or machine programming necessary
- ▶ Highest accuracy: The uncertainty of the interferometric measurement under typical conditions is  $U(k=2) = 0.2 \mu\text{m} + 0.3 \mu\text{m}/\text{m}$
- ▶ Future proof: In conformance with the upcoming revision of ISO 10360-2
- ▶ Interfaces to the Etalon LaserTRACER and to laser-trackers (Leica, Faro)
- ▶ Detailed measurement report
- ▶ Evaluation and consideration of test uncertainties according to latest standards
- ▶ Optional Circular Test according to ISO 230-4

## SYSTEM REQUIREMENTS

- ▶ Processor: minimum 1 GHz
- ▶ RAM: at least 512 MB
- ▶ Free hard disk space: 250 MB
- ▶ Graphic card resolution: 1024 x 768
- ▶ Operating system: Windows XP, VISTA or 7 (32 Bit)
- ▶ Port: at least two free USB
- ▶ Reporting reader: Adobe Reader