ZEISS T-SCAN

3D Digitizing / Laserscanning

Intuitive data capture with hand-held laser scanner

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The innovative laserscanning complete solution convinces with high performance, user friendlyness and flexibility

Fast, intuitive and highly precise 3D scanning has taken on a new dimension in coordinate measurement technology with the hand-held laser scanner ZEISS T-SCAN CS. The revolutionary and modular all-in-one concept, includes perfectly matched components (tracking camera, hand-held scanner and touchprobe), thereby offering highest flexibility for a large variety of applications. The high-performance software platform colin3D ensures a consistently efficient and project-oriented procedure during the entire measuring process.

ZEISS T-SCAN: quick and intuitive 3D data capture with the hand-held laser scanner

User-oriented, ergonomic system design and easy handling for efficient data capture

The design of the ZEISS T-SCAN laser scanner has been ergonomically tailored to the operator´s needs, allowing a fatigue-free and intuitive scanning process. With its light-weight and compact sensor, the system is ideally suited for data capturing even in most difficult to reach areas.

Outstanding technical features, e.g. the high dynamic range for data acquisition on various object surfaces, and a hitherto unseen data rate allow for an unparalleled scanning speed and precise measurement results.

Hand-held touch probe ZEISS T-POINT - the ideal portable coordinate measurement machine for easy single point measurements
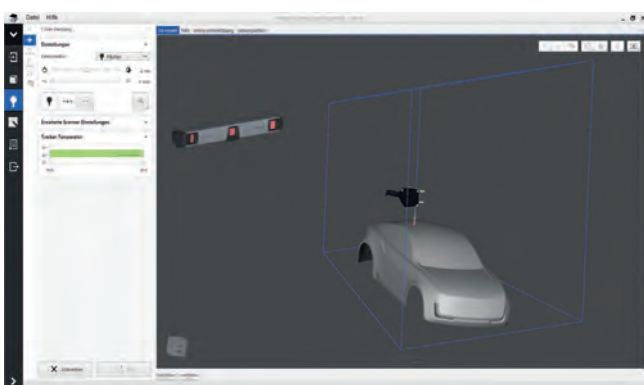
Hand-held touch probe for fast point measurements

The ZEISS T-POINT touch probe measures the selected measuring point quickly and reliably, making it the perfect solution for single-point measurements on object areas such as (trimmed) edges and ruled geometries.

The device can be used with conventional measuring probes, which can be simply and quickly replaced.

Dynamic Referencing

Record 3D data with high precision, even on moving objects - with the dynamic referencing function, you perform your measurements independently of component movements and difficult environmental conditions, such as vibrations (production environment, e.g. press shop or parts in operation: measurement of sealings on moving car doors).

Universal software interfaces

From data acquisition through data processing to data comparison - the ZEISS T-SCAN system can be controlled by a multitude of direct realtime interfaces. Thus, an integration into existing processes is easily possible.

The ZEISS colin3D software supports a highly efficient workflow

Optical tracking systems for different measurement volumes

From small up to large-format objects - the system configurations „CS+" and „LV" offer ideal solutions for your individual measurement application.
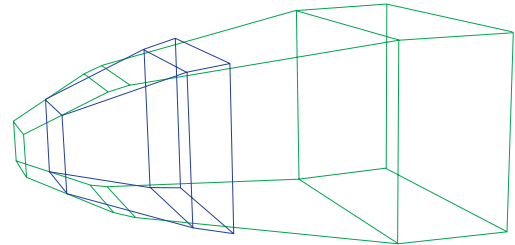
ZEISS T-TRACK CS+: The „plus" in flexibility

The ZEISS T-TRACK CS+ optical tracking system is optimally aligned with all other system components and therefore opens up to a wide range of measurement applications.

The high data processing rate allows measurements with highest speed, contributing to minimizing the time for which the object is needed for the scanning process.

ZEISS T-TRACK LV: The large-volume tracker

With the unique large measuring volume of the innovative scanning and tracking combination, you gain completely new perspectives in optical 3D digitalization.

Now you can record the 3D data of large-format objects even faster and more easily - the high scanning speed of the hand-guided laser scanner and a tracking volume of up to 35 m³ offer you the greatest possible freedom of movement for an efficient measurement process.

Wide range of applications

- Quality control / inspection
  - Comparison to CAD data
  - Boundary/edge extraction (sheetmetal parts)
  - Production-related inspection
- Mold and toolmaking
  - Tool reconstruction
  - Scan data for generation of tool paths for milling
  - Documentation of actual 3D data at tool release
  - Inspection of complex welding constructions
  - Setting up of gauges and mounting fixtures
- Rapid Manufacturing
  - Scanning of 3D data for Rapid Prototyping

- Reverse Engineering
  - Measurement of highly complex object geometries for Reverse Engineering
- Design
  - Scanning of design models for further processing in CAD data, documentation
  - Capture of character lines
  - Quick scanning of base surfaces (alignment)
- Capture of complex component dynamics, e.g. during fixture procedure
- Archaeology, scanning of art/historical objects
- Medical technical applications (motion capture, etc.)

ZEISS T-SCAN - technical data hand-held laser scanner

Measurement depth	+/- 50 mm
Line width	up to 125 mm
Mean working distance	150 mm
Line frequency	up to 330 Hz
Data rate	210.000 points/second
Weight	1100 g
Sensor dimensions (incl. handle and IR pins)	300 x 170 x 150 mm
Standard cable length scanner-PC	10 m
Mean point distance	0.075 mm
Points per line	1312
Laser type	diode
Wavelength	658 nm
Laser class	2 M
Available software	ZEISS colin3D direct real-time interfaces to almost every standard software packages available

ZEISS T-TRACK - technical data optical tracking systems

	T-TRACK CS+	T-TRACK LV
Stand-off distance object-camera	2.0 m - 4.0 m	1.5 m - 7.5 m
Measurement volume	6.3 m²	35 m²
Field-of-view	up to 2466 mm x 2178 mm	up to 3700 mm x 2600 mm
Measuring rate	up to 4 kHz	up to 4.5 kHz
Weight	18.5 kg	24 kg
Dimensions	1150 x 180 x 150 mm	1157 x 230 x 175 mm
PC	Notebook or desktop PC	Notebook or desktop PC
Available software	ZEISS colin3D direct real-time interfaces to almost every standard software packages available	ZEISS colin3D direct real-time interfaces to almost every standard software packages available
Possible configurations	T-SCAN CS / T-POINT CS / T-REF CS	T-SCAN LV / T-POINT LV / T-REF LV