PRODUCT BROCHURE

HEXAGON
METROLOGY

LEICA T-SCAN 5

The most dynamic laser scanner ever

BEST LARGE VOLUME SCANNING TECHNOLOGY IN A PORTABLE MEASUREMENT SYSTEM

Are you ready for the next generation of scanning technology? The combination of Leica T-Scan 5 and Leica Absolute Tracker offers the perfect match to ensure hundreds of millions of accurate points on virtually any surface, from matte black to highly reflective, even carbon fiber all without any special preparation.

The Leica Absolute Tracker AT960 takes your scanning experience to a new level of excellence with its unrivalled tracking speed and dynamic accuracy within a measurement volume of up to 60m (ø) in a single set-up.

For almost a decade Leica T-Scan stands for reliability and accuracy in the most demanding shopfloor environments. The system is insensitive to ambient lighting conditions and allows seamless integration of high precision handheld Leica T-Probe for tactile probing of features – a truly flexible all-in-one solution.

Features and Benefits

Highest point density
Detecting smaller details and getting your scanning results much faster are the main advantages of Leica T-Scan 5's new high point density feature. The higher lines and scan rates allow ideal feature recognition and a much quicker scanning at approved quality levels. With up to 160 lines per second or up to 210,000 points per second (210 kHz sampling rate), Leica T-Scan 5 is more than 15x faster compared to the previous model.

Ultra High Dynamic Range
The T-Scan 5 can automatically detect very fine differences on any surface type or colour. This allows the operator to pay attention to the part being scanned, not the scanner settings required to scan the different surface types.

Enhanced usability
The almost doubled stand-off distance and wider scan line allows more efficient data capture especially in difficult to reach areas with less effort. Hidden features and deep recesses are easier to cover than ever before. Leica T-Scan 5 new user feedback with improved dual-colour pilot beam and acoustic feedback offers most reliable data acquisition and superb user experience.

Optimized for automation
With the fastest data capture rate ever, new cable design and improved robustness, the new Leica T-Scan 5 provides time demanding production processes the ultimate benefit. It has been designed from the ground up to take full advantage of our most dynamic laser tracker performance and advancing robotic speeds in fully automated installations.

Simplicity at its best
With no need of object preparation, the Leica T-Scan 5 system has never been as simple to install or use. The small lightweight controller needs neither configuration nor complicated cabling to connect.

SYSTEM SPECIFICATIONS
LEICA T-SCAN 5

Measurement volume

Max. volume (ø)	60 m (131 ft)
Horizontal	360°
Vertical	± 145°

Acceptance angle

(Freedom to rotate)	
Pitch angle	± 45°
Yaw angle	± 45°
Roll angle	360°, unlimited

Measuring and tracking performance

Tracking speed all directions	> 1 m/s (3.3 ft/s)
Acceleration all directions	1g

Leica T-Scan sensor

Measuring depth	up to 200 mm (7.87”)
Mean scan width	100 mm (3.94”)
Line frequency	up to 160 lines/second
Measurement sampling rate	up to 210,000 points per sec
Point density	0.075 mm (0.0028”)
Laser Safety	IEC 60825-1 (2007-03), EN 60825-1 (2007-10), class 2M

Weight

Leica T-Scan 5	1,080 g (2.38 lbs)

Measurement uncertainty of spatial length (2 sigma)

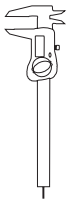
UL = ± 60 µm if under 8.5 m (± 0.0024” if under 27.9 ft)
UL = ± 26 µm + 4 µm/m if greater than 8.5 m
(± 0.0010” + 0.00005”/ft if greater than 27.9 ft)

Measurement uncertainty of sphere radius (2 sigma)

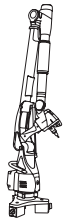
UR = ± 50 µm if under 8.5 m (± 0.002” if under 27.9 ft)
UR = ± 16 µm + 4 µm/m if greater than 8.5 m
(± 0.0006 “ + 0.00005”/ft if greater than 27.9 ft)
US = ± 85 µm + 1.5 µm/m (±0.0033” + 0.00002”/ft)

Measurement uncertainty of plane surface (2 sigma)

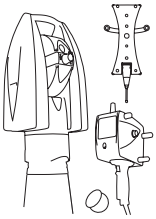
UP = ± 80 µm + 3 µm/m (±0.0031” + 0.00004”/ft)



PRECISION MEASURING INSTRUMENTS



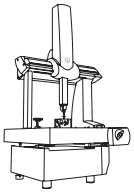
PORTABLE MEASURING ARMS



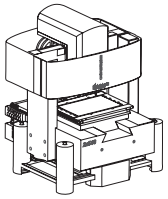
LASER TRACKERS & STATIONS

WHITE LIGHT SCANNERS

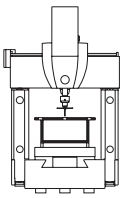
SENSORS



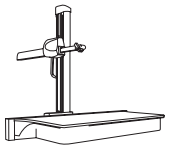
BRIDGE CMMS



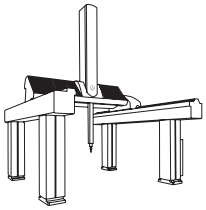
MULTISENSOR & OPTICAL SYSTEMS



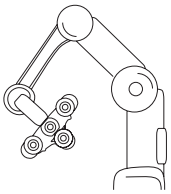
ULTRA HIGH ACCURACY CMMS



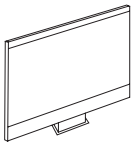
HORIZONTAL ARM CMMS



GANTRY CMMS



AUTOMATED APPLICATIONS



SOFTWARE SOLUTIONS

HEXAGON
METROLOGY

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