



Leica T-Scan TS 50-A
More than just a line scanner

Leica
Geosystems



 **HEXAGON**
METROLOGY

Advanced scanning technology in a 6DoF measurement system



Leica T-Scan and Leica Absolute Tracker – the dream team of industrial metrology. This tracking solution offers 6 degrees of freedom and measures very large volumes. The Leica Absolute Tracker does not need to be relocated once it is set up. And if the measurement object is extremely large, no photogrammetric targets are required after the tracker relocation. Save time and do not compromise on accuracy.

The Flying Dot technology is the only truly automated scanning solution. The adjustment of the laser power to obtain the best measurement result of a specific surface type is completely autonomous. This makes the scanning results totally user independent.

Leica T-Scan adapts the laser intensity to shiny metallic or dark surfaces. Powdering is not required – which makes the measurement process even faster.

Leica T-Scan, the Leica Geosystems handheld scanner. Count on reliability and accuracy in any measurement position.

Feature	Benefit
Leica T-Scan TS50-A and Leica Absolute Tracker measurement system	Up to 25% better system accuracy compared to previous model.
Optimized laser optics	Better data quality: Higher performance on dark or shiny surfaces. Up to 20% less noise than before. More materials can be scanned without spray.
Doubled data rate	Time savings: Scan large surfaces in half the time compared to the previous Leica T-Scan generation.
Minimal point distance cut in half	Increased accuracy: Sheet metal features and contours can be digitised more precisely.
Insensitive to environmental light	Faster measurement process: Time consuming light adjustment or protection is not necessary.



System specifications Leica T-Scan TS50-A

Measurement volume

Maximal volume Leica AT 901-MR (∅)	18 m (59 ft)
Maximal volume Leica AT 901-LR (∅)	30 m (98 ft)
Horizontal	360°
Vertical	± 45°

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	78 mm (3.07")
Mean scan width	90 mm (3.54")
Mean measuring distance	86 mm (3.39")
Line frequency	up to 140 lines/second
Measurement sampling rate	20,000 points per second
Point density	0.07 mm – 0.98 mm (0.0028" – 0.039")
Accuracy	±20 µm (0.00079")

Laser Safety

	IEC 60825-1; 1993+A1
	1997 + A2: 2001, class 2
Working temperature	+16°C to +24°C (61°F to 75°F)
Storage temperature	-10°C to +60°C (14°F to 140°F)
Relative humidity	10 – 90% non-condensing

Weight

Leica T-Scan	1,200 g (2.6 lbs)
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Measurement uncertainty of spatial length (2 sigma)

UL = ± 60 µm if under 8.5 m (± 0.0024" if under 27.9 ft)
UL = ± 60 µm + 4 µm/m if greater than 8.5 m (± 0.0024" + 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 = ± 50 µm + 4 µm/m if greater than 8.5 m ((± 0.002" + 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)



Leica AT901-MR gives you a measurement volume of up to 18 m (59 ft),
Leica AT901-LR up to 30 m (98 ft)





Whether building the fastest car, the biggest plane, or the most precise tooling, you need exact measurements to improve quality and productivity. So when it has to be right, professionals trust Leica Geosystems Metrology to help collect, analyze, and present 3-dimensional (3D) data for industrial measurement.

Leica Geosystems Metrology is best known for its broad array of control and industrial measurement products including laser trackers, Local Positioning Technology (LPT) based systems, hand-held scanners, 3D software and high-precision total stations. Those who use Leica Metrology products every day trust them for their dependability, the value they deliver, and the world-class service & support that's second to none.

Precision, reliability and service from Leica Geosystems Metrology.

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