PRODUCT BROCHURE

HEXAGON
METROLOGY

LEICA T-SCAN TS 50-A

More than just a line scanner

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.

FEATURES AND BENEFITS

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

Max. volume Leica AT 901-MR (ø)	18 m (59 ft)
Max. volume Leica AT 901-LR (ø)	30 m (98 ft)
Max. volume Leica AT 901-LR with T-Cam XR (ø)	50 m (164 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)

Measurement uncertainty of spatial length (2 sigma)

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

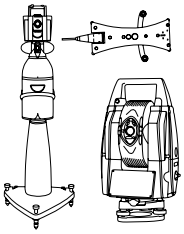
Measurement uncertainty of sphere radius (2 sigma)

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

Measurement uncertainty of plane surface (2 sigma)

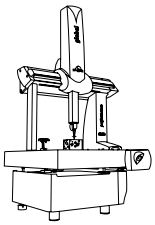
UP = ± 80 um + 3 um/m (±0.0031" + 0.00004"/ft)

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

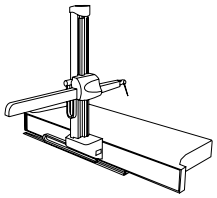


LASER TRACKERS
& STATIONS

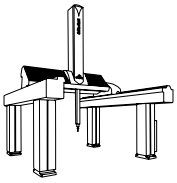
PORTABLE MEASURING ARMS



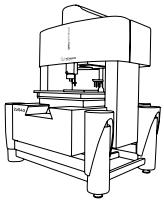
BRIDGE CMMS



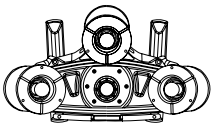
HORIZONTAL ARM CMMS



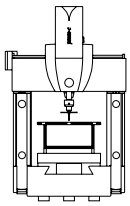
GANTRY CMMS



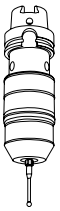
MULTISENSOR & OPTICAL SYSTEMS



WHITE LIGHT SCANNERS

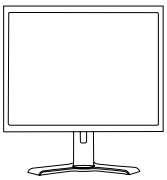


ULTRA HIGH ACCURACY CMMS



SENSORS

PRECISION MEASURING
INSTRUMENTS



SOFTWARE SOLUTIONS

HEXAGON
METROLOGY

Hexagon Metrology offers a comprehensive range of products and services for all industrial metrology applications in sectors such as automotive, aerospace, energy and medical. We support our customers with actionable measurement information along the complete life cycle of a product – from development and design to production, assembly and final inspection.

With more than 20 production facilities and 70 Precision Centers for service and demonstrations, and a network of over 100 distribution partners on five continents, we empower our customers to fully control their manufacturing processes, enhancing the quality of products and increasing efficiency in manufacturing plants around the world.

For more information, visit **www.hexagonmetrology.com**

Hexagon Metrology is part of Hexagon (Nordic exchange: HEXA B). Hexagon is a leading global provider of design, measurement and visualisation technologies that enable customers to design, measure and position objects, and process and present data.

Learn more at **www.hexagon.com**

Printed in Germany. October 2013

773448