

Leica ScanStation  
**A new level of versatility  
in laser scanners**



- when it has to be **right**

**Leica**  
Geosystems



# Leica ScanStation

## A new class of laser scanner

Scan with the freedom, ease-of-use and accuracy of a total station. Leica ScanStation represents a new class of laser scanner and a new level of versatility in laser scanning.

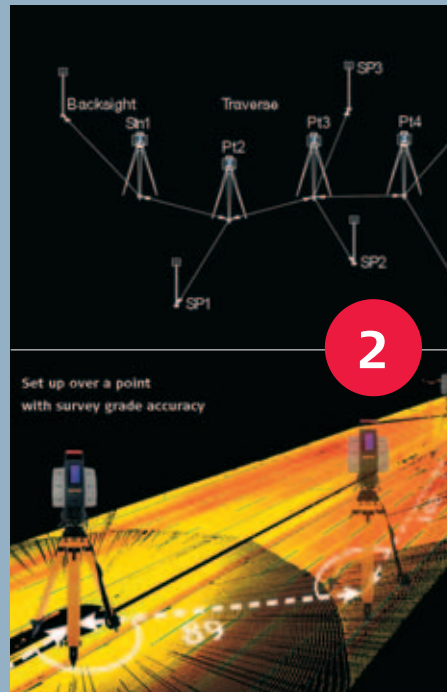
### Why does Leica ScanStation represent a "new category" of scanner?

With the integration of dual-axis (tilt) compensation into the industry's leading laser scanner platform, ScanStation sets a new industry standard for versatility, productivity, and ease-of-use. Leica ScanStation is the first scanner with all 4 of these fundamental total station features in 1 scanner:



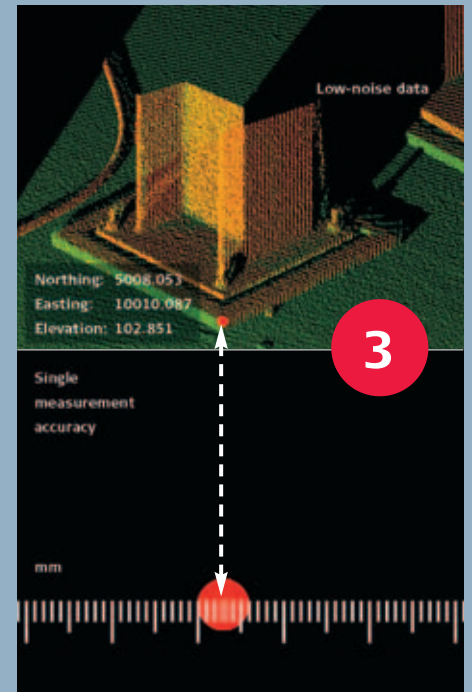
#### 1. Full Field-of-View

Scanners capture ceilings, undersides of bridges, elevated pipe racks, tall facades, columns and towers. The field-of-view of a total station isn't restricted. Surveyors and other professionals shouldn't have to settle for a scanner with a restricted field-of-view, either.



#### 2. Survey-grade dual-axis (tilt) compensation

For greater flexibility and productivity, ScanStation users can traverse from control and resection with survey-grade accuracy. The same compensator as in Leica total stations also lets users scan with fewer targets and stakeout if needed.



#### 3. Survey-grade point accuracy

While some scanners require "averaging" to approach survey-grade accuracy, ScanStation delivers survey-grade accuracy for each individual measurement. ScanStation's ultra-fine point spacing at long range also lets users take optimal advantage of scan targets for unsurpassed project control and registration accuracy.

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In addition to its four critical total station features, Leica ScanStation offers a host of other advantages for surveyor friendliness, productivity and versatility. The bottom line is the ability to apply High-Definition Surveying™ (HDS™) even more profitably for everyday as-built and topographic surveys.

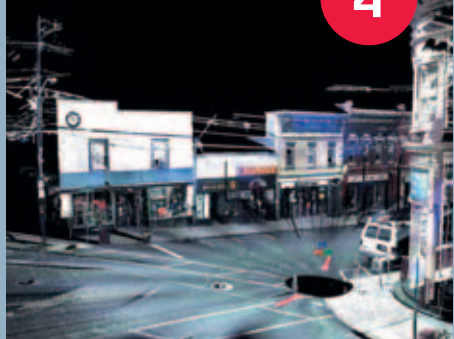
- **High-speed pulsed laser**  
Fast scanning and excellent, useful distance
- **X-function compatibility**  
Interoperable with Leica System 1200
- **Integrated dual-axis compensator**  
For survey-grade traversing



- **Integrated high-resolution camera**  
For faster scene selection and compelling, automatically rectified photo overlays
- **Advanced scripting controls**  
SmartScan™ firmware allows automated sequencing of scans and unattended operation
- **HI marks, tribrach mount, carry handle, and QuickScan button**  
Standard procedures and accessories make ScanStation easy to learn and use
- **External bubble level**  
Conveniently located on the back side of the moving scan head



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**4. Excellent practical, useful distance**  
ScanStation's range of approx. 300 m for 90% reflectivity surfaces and 134 m for 18% reflectivity surfaces addresses the vast majority of typical sites for reflectorless instruments. ScanStation's high accuracy, narrow beam, and fine-scanning capability provide excellent useful range for achieving survey-grade results.

## Key Leica ScanStation Performance Specifications

<b>Instrument type</b>	Pulsed, dual-axis compensated, high-speed laser scanner, with survey-grade accuracy, range, and field-of-view	
<b>User interface</b>	Notebook or Tablet PC	
<b>Camera</b>	Integrated high-resolution digital camera	
<b>Accuracy of single measurement</b>	Position*	6 mm
	Distance*	4 mm
	Angle (horizontal/vertical)	60 µrad/60 µrad (3.8 mgon/3.8 mgon) **
<b>Laser spot size</b>	From 0 – 50m: 4 mm (FWHH-based); 6 mm (Gaussian-based)	
<b>Modeled surface precision/noise</b>	2 mm **	
<b>Target acquisition</b>	2 mm std. deviation	
<b>Dual-axis compensator</b>	Resolution 1", dynamic range +/- 5'	
<b>Data integrity monitoring</b>	Periodic self-check during operation and start-up	
<b>Laser scanning system</b>	Range	300 m @90%; 134 m @18% albedo
	Scan rate	Maximum instantaneous: up to 4,000 points/sec Average: dependent on specific scan density and field-of-view
	Scan density	1.2 mm max, through full range; fully selectable horizontal & vertical point spacing
<b>Laser class</b>	3R (IEC-60825-1), visible green	
<b>Lighting</b>	Fully operational between bright sunlight and complete darkness	
<b>Power supply</b>	36 V; AC or DC; hot swappable	
<b>Power consumption</b>	<80 W, avg.	
<b>Turret rotation</b>	Direct drive, brushless; cable-free	
<b>Temperature</b>	Operation: 0° C to + 40° C; Storage: - 25° C to + 65° C	
<b>Data exchange</b>	Import	Cyclone native IMP object database format, Cyclone Object Exchange (COE) format, ASCII point data (XYZ, SVY, PTS, PTX, TXT); Leica X-function DBX, LandXML, ZFS, ZFC, 3DD
	Export	ASCII point data (XYZ, SVY, PTS, PTX, TXT); DXF; Leica X-function DBX, LandXML, PTZ

Specifications subject to change without notice  
See Leica ScanStation Product Specifications for full technical data  
\*At 50 m range, one sigma \*\*One sigma

Whether you're designing a modification to a complex refinery piping system, surveying a site or documenting a historic building, you need reliable measurements. High-Definition Surveying™ scanning systems and software by Leica Geosystems provide you with exact data of what's there.

When your as-built information has to be right, rely on Leica Geosystems, the company that professionals trust for their scanning solutions. Leica Geosystems is best known for pioneering scanning technology with trustworthy, total solutions: versatile, accurate laser scanners, industry standard point cloud software, and a full complement of accessories, training and support.

Precision, quality and service from Leica Geosystems.

**When it has to be right.**

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Laser class 3R in accordance with IEC 60825-1 resp. EN 60825-1



**Leica ScanStation**  
Product information  
and specifications



**Leica HDS6000**  
Product information  
and specifications



**Leica Cyclone 5.6  
SCAN**  
Product information



**Leica Cyclone 5.6  
MODEL, SURVEY**  
Product information



**Leica Cyclone 5.6  
REGISTER**  
Product information

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