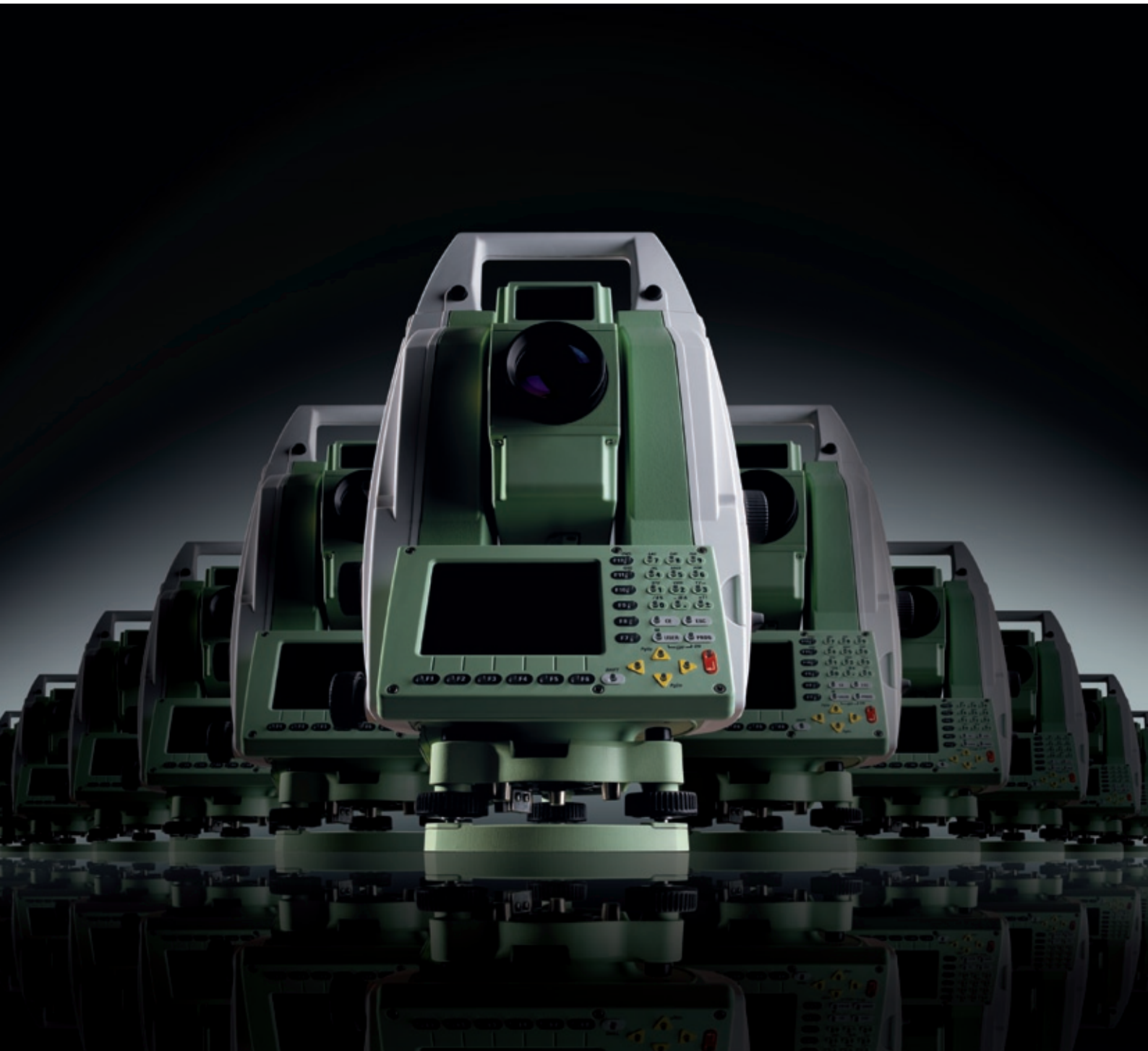


Leica TS30

Champion's League.



- when it has to be **right**

Leica
Geosystems

Leica TS30

When compromises are simply not accepted



The new Leica TS30 total station is unique. This new total station has redefined precise surveying by offering unmatched accuracy and quality. Never again will surveyors with demanding tasks need to make compromises, the TS30 total station is ready for any challenge.

When only 0.5" accuracy is acceptable.

It all started more than 75 years ago with the Wild T3 precision theodolite that stunned the surveying community with highly accurate measurements. Now, four generations later, Leica Geosystems continues to build on the values of accuracy and quality. The latest generation of Champions, the Leica TS30 total station has reached the pinnacle. Generations of surveyors have trusted in accuracy and quality from Leica Geosystems, now it's time to take this trust to the next level.

Go forth and survey.



Leica TS30

Pride in accuracy

Surveyors take great pride in accuracy. The Leica TS30 delivers impressive performance in individual disciplines. But most importantly it is a champion in perfectly combining angle measurement, distance measurement, automatic target recognition and motorisation. The accuracy of the Leica TS30 is in a league of its own, a true companion for surveyors with pride.

Leica TS30 accuracy – the facts:



■ Angular accuracy – 0,5"



■ Pinpoint EDM accuracy
0.6 mm + 1 ppm to prism
2 mm + 2 ppm to any surface



■ Automatic Target Recognition (ATR) accuracy – 1"

Imagine the perspectives.

Leica TS30

Performance that counts

Achieving both high performance and high accuracy is challenging. The Leica TS30 has reached a new level of performance, whereby high accuracy surveying can be achieved in an easy, fast and reliable way, regardless of the project demands.



World's best Dynamic Tracking Performance

To achieve maximum acceleration and speed whilst maintaining optimal accuracy under the most demanding dynamic conditions, new direct drives using Piezo technology were developed for the TS30. This new Piezo technology allows surveyors to benefit from higher productivity through unmatched dynamic tracking performance. Furthermore, Piezo drives ensure longer operation through low power consumption and minimal maintenance.



Search-Lock-Measure

For an optimal measurement process an absolute harmonization of all instrument functions is required. The Leica TS30 delivers the perfect combination of angle measurement, distance measurement, automatic target recognition and motorisation. Each individual sensor was developed to the highest standards to guarantee maximum performance and accuracy during the measurement process, something that benefits all surveyors.



Long service intervals

Quality is not only our aspiration but our obligation. It is the result of over 200 years of tradition and of constant innovations based on intensive research. Therefore the Leica TS30 is designed to withstand the roughest use in the most severe environments. It will operate throughout a wide temperature range and is protected against wind driven rain, sand and dust. The TS30 can operate for extremely long intervals without suffering from wear and tear. The long service interval and low maintenance costs ensure maximum productivity.



SmartWorx

Leica SmartWorx provides a software suite with unparalleled ease-of-use and performance. No matter how complex the application, SmartWorx has functionality to complete the task with ease. With identical operation for TPS and GNSS, users can effortlessly change between Leica TPS and GNSS instruments. Seamless dataflow is guaranteed between SmartWorx and the PC Software Leica Geo Office, as well as with all other software packages through flexible import and export routines.

Exceptional performance – as expected from the best – the Leica TS30.



Leica TS30

A winning team

Leica TS30 surveyors benefit from more than a total station. What first seems to be a total station, is actually one component in the most complete portfolio of solutions for precise surveying. The Leica TS30 offers unlimited flexibility and scalability through complete compatibility with System 1200 accessories.



Automated One-Person Surveying

With a unique patented 360° prism, the Leica TS30 can be operated in one-man robotic mode with an ergonomic control unit.

A winner with or without GNSS.



GNSS Extension

Equipped with a future proof GNSS antenna, the Leica TS30 SmartStation delivers immediate station coordinates. Furthermore, the combination of a GNSS antenna and the prism accelerates the station positioning and orientation process. The Leica TS30 perfectly combines with GNSS to further enhance productivity.

Leica TS30

Unmatched specifications

Angle Measurement		
Accuracy ¹	Hz, V	0,5" (0.15 mgon)
	Display resolution	0.01" (0.01 mgon)
	Method	Absolute, continuous, quadruple
Distance Measurement (Prism)		
Range	Round prism (GPR1)	3500 m
	360° prism (GRZ4)	1500 m
	Reflective tape (60 mm x 60 mm)	250 m
Accuracy ² /Measurement time to prism	Precise ³	0.6 mm + 1 ppm / typ. 7 s
	Standard	1 mm + 1 ppm / typ. 2.4 s
Accuracy ^{2, 4, 5} / Measurement time to reflective tape		1 mm + 1 ppm / typ. 7 s
Method	System analyzer based on phase shift measurement (coaxial, visible red laser)	
Distance Measurement (Non-Prism)		
Range ⁶		1000 m
Accuracy ^{2, 7} /Measurement time		2 mm+2 ppm / typ. 3 s
Laser dot size	at 30 m / at 50 m	7 mm x 10 mm / 8 mm x 20 mm
Method	System analyzer based on phase shift measurement (coaxial, visible red laser)	
Motorisation		
Maximum acceleration and speed	Maximum acceleration	400 gon (360°) / s ²
	Rotation speed	200 gon (180°) / s
	Time for change face	2.9 s
	Positioning Time for 200 gon (180°)	2.3 s
Method	Direct drives based on Piezo technology	
Automatic Target Recognition (ATR)		
Range ATR mode / LOCK mode	Round prism (GPR1)	1000 m / 800 m
	360° prism (GRZ4, GRZ122)	800 m / 600 m
Accuracy ¹ /Measurement time	ATR angle accuracy Hz, V	1"
	Base positioning accuracy	±1 mm
	Pointing precision at 1000 m	±2 mm
	Measurement time (GPR1)	3 - 4 s
Method	Digital image processing	
Power Search (PS)		
Range ^{5, 8}	360° prism (GRZ4, GRZ122)	300 m
Search time ⁹	Typical	5 s
Method	Digital signal processing (rotating laser fan)	
General		
Telescope	Magnification	30 x
	Focusing range	1.7 m to infinity
Keyboard and Display	Display	¼ VGA, colour, touch, both faces
	Keyboard	34 keys, illuminated
Data storage	Internal memory	256 MB
	Memory card	CompactFlash card 256 MB or 1 GB
	Interfaces	RS232, Bluetooth® Wireless
Operation	Three endless drives	For one or two hand manual operation
	Userdefinable Smart key	Fast precision trigger key for manual high precision measurements
	Electronic Guide Light	For guided stakeout
Power Management	Internal battery (GEB241)	Lithium-Ion
	Operating time	9 h
	Standby Power Consumption	typ. 5.9 W
Weight	Total Station incl. GEB241	7.6 kg
Environmental specifications	Operating temperature	-20° C to +50° C (-4° F to +122° F)
	Dust / water (IEC 60529)	IP54
	Humidity	95%, non-condensing

¹ Standard deviation ISO-17123-3

² Standard deviation ISO-17123-4

³ Overcast, no haze, visibility about 40 km, no heat shimmer, range up to 1000 m, GPH1P reflector

⁴ Distance > 10 m

⁵ Target perfectly aligned to instrument

⁶ Object in shade, sky overcast, Kodak Gray Card (90% reflective)

⁷ Distance > 500 m 4 mm+2 ppm

⁸ average atmospheric conditions

⁹ depending on target range

Imagine the inner values.



Whether you want to survey a skyscraper or a tunnel, monitor the movements of a volcano or objects on a construction site – you need reliable data. Leica Geosystems offers a complete portfolio of innovative solutions for precise surveying that deliver unprecedented accuracy, quality and performance. With Leica Geosystems no task is too challenging, leverage your professional imagination to success.

Leica Geosystems' customers benefit from service and support that spans time zones and geography. With true partnerships – it's our commitment to continue to provide the level of support and collaboration you have come to expect when you put your trust in Leica Geosystems.

When it has to be right.

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Total Quality Management – our commitment to total customer satisfaction.

Ask your local Leica Geosystems dealer for more information about our TQM program.

Distance meter (Prism), ATR and PowerSearch:

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

Laser plummet:

Laser class 2 in accordance with IEC 60825-1 resp. EN 60825-1

Distance meter (Non-Prism):

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



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Leica TM30
Product brochure



Leica SmartStation
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Leica SmartPole
Product brochure



Leica GPS1200+
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