



SIGMA₃D

Zu vermieten:

**LEICA Absolute Tracker AT960
mit T-Probe und T-Scan 5
Technische Spezifikationen**



Sie haben Fragen zur Vermietung oder wollen ihre Mitarbeiter auf dieses Projekt schulen?
Wir beraten Sie gerne!

SPECIFICATIONS

Accuracy

Reflector*	$U_{(x,y,z)} = \pm 15 \mu\text{m} + 6 \mu\text{m/m}$
AIFM Absolute Distance Performance	$\pm 0.5 \mu\text{m/m}$
Absolute Angular Performance	$\pm 15 \mu\text{m} + 6 \mu\text{m/m}$
Dynamic lock on	$\pm 10 \mu\text{m}$
Orient to Gravity (OTG)	$U_{z(\text{OTG})} = \pm 15 \mu\text{m} + 8 \mu\text{m/m}$

*All accuracies specified as Maximum Permissible Errors (MPE) and calculated per ASME B89.4.19-2006 and ISO 10360-10:2016 using precision Leica 1.5" Red Ring Reflectors at up to 60 m distance unless otherwise noted.

Leica T-Probe**	$U_{(x,y,z)} = \pm 35 \mu\text{m}$
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**Additional Leica T-Probe uncertainty to be added according to ISO/IEC Guide 98-3:2008 to the existing Leica Absolute Tracker AT960 Ux,y,z uncertainty for a complete Ux,y,z uncertainty at up to 25 m distance.

Leica Absolute Scanner LAS	$U_L = \pm 60 \mu\text{m}$ 150 000 points/s
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Leica T-Scan 5	$U_L = \pm 60 \mu\text{m}$ 210 000 points/s
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Leica T-Mac***	$15 \mu\text{m} + 6 \mu\text{m/m}$
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Typical rotation accuracy	$\pm 0.01^\circ$
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Accuracy of timestamp	$< 5 \mu\text{s}$
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***All accuracies specified as Maximum Permissible Errors (MPE). Typical results are half of MPE.

Environmental

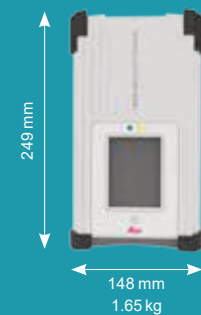
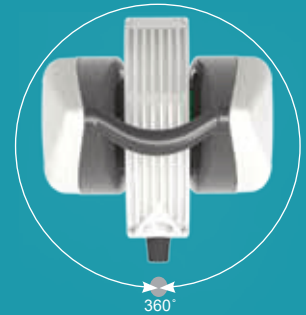
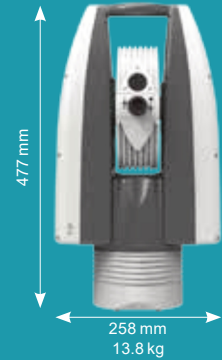
Dust/Water	IP54 (IEC 60529)
Operating Temperature	0°C to 40°C
Relative Humidity	max. 95% (non-condensing)
Environmental Monitor	Temperature, pressure and humidity

Interface

Cable	TCP/IP (Cat5)
Wireless	WLAN (IEEE 802.11n)

General Information

Overview Camera	4:3 IR enhanced image $\approx 10^\circ$ FOV
Power	AC power supply Lithium-ion battery with 8-hour typical runtime
Laser	Class 2 Laser Product in accordance with IEC 60825-1 Second Edition (2014-05)



SPEZIFIKATIONEN



Systemvergleich

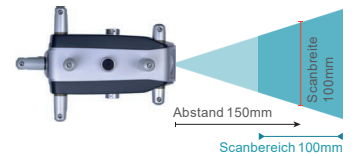
	Leica Absolute Scanner LAS	Leica Absolute Scanner LAS-XL	Leica T-Scan 5
Größe/ Gewicht Scanner	300 x 201 x 140 mm / 0.94 kg	300 x 201 x 140 mm / 0.96 kg	380 x 210 x 138 mm / 1.1kg
Größe/ Gewicht Controller	226 x 146 x 91 mm / 1.9kg	226 x 146 x 91 mm / 1.9kg	316 x 235 x 142 mm / 6 kg
Arbeitsabstand	180 mm	700 mm	150 mm
Scanbereich	± 40 mm	± 300 mm	± 50 mm
Maximale Scanbreite (am Abstand)	220 mm	468 mm	100 mm
Maximale Abtastgeschwindigkeit	150 000 Punkte pro Sekunde*	143 000 Punkte pro Sekunde*	210 000 Punkte pro Sekunde*
Maximale Linienfrequenz	100 Hz*	100 Hz*	330 Hz*
Minimale Punktdichte (am Abstand)	0.013 mm*	0.045 mm*	0.075 mm
IP-Schutzart Scanner/ Controller	IP50 (IEC60529) / IP30 (IEC60529)	IP50 (IEC60529) / IP30 (IEC60529)	IP40 (IEC60529) / IP40 (IEC60529)

*Abhängig vom Messmodus

Systemgenauigkeit

	Leica Absolute Scanner LAS und Leica T-Scan 5	Leica Absolute Scanner LAS-XL
Messunsicherheit von Raumlängen (2 Sigma)	$U_L = \pm 60 \mu\text{m}$ unter 8.5 m $U_L = \pm 26 \mu\text{m} + 4 \mu\text{m/m}$ über 8.5 m	$U_L = \pm 150 \mu\text{m}$
Messunsicherheit von Kugelradien (2 Sigma)	$U_R = \pm 50 \mu\text{m}$ unter 8.5 m $U_R = \pm 16 \mu\text{m} + 4 \mu\text{m/m}$ über 8.5 m	$U_R = \pm 200 \mu\text{m}$
Messunsicherheit von ebenen Flächen (2 Sigma)	$U_p = \pm 80 \mu\text{m} + 3 \mu\text{m/m}$	$U_p = \pm 450 \mu\text{m}$

Leica T-Scan 5



LAS



LAS-XL

