

Absolute Tracker systems and accessories

Version 3.0





This catalogue contains the complete range of products and accessories available for Absolute Tracker systems from Hexagon. Whatever the industry or application, the Absolute Tracker has a solution. All of our products and accessories offer the same premium quality and practical design you would expect from a Swiss made product.





| shop.hexagonmi.com

Hexagon's Manufacturing Intelligence online shop offers a streamlined search, order and delivery service for a wide range of accessories and spare parts in many countries worldwide.

- · Quickly find the right inspection solution with the shop's state-of-the-art search function (filter by price, radius, thread and other criteria to pinpoint the exact product required).
- · Fast UPS dispatch.
- · Easy bulk purchase via CSV file uploads.
- · Convenient payment on account or by credit card.

Whether you're buying single items or in bulk, shop.hexagonmi.com takes the time and stress out of securing the measuring equipment you need.

Please direct any questions about Hexagon products or accessories to an authorised local sales representative to receive guidance and assistance in making an appropriate purchasing decision.

Important note

The information provided by Hexagon in this catalogue is for general information purposes only. All information and arm configurations subject to change without further notice. The images in this document are for reference only and are subject to change without notice. The colour, shape and weight of the products represented here may be different from those delivered. Copyright and Intellectual Property: All elements of this document (including trademarks, text, graphics, logos, photos, etc.) are the property of Hexagon AB in the United States and selected other countries. Therefore, any reproduction and/or representation and/or redistribution in whole or in part, in any electronic form or not, present or future, is prohibited unless express consent is given.



Contents

Applications

Absolute Tracker systems

Scanning solutions
Probing solutions
Automation solutions
Mounting solutions
Reflectors and holders
Electronics
Compensations and field checks
Other accessories
Industrial theodolites
Application software
HxGN SFx Asset Management
Warranties and maintenance































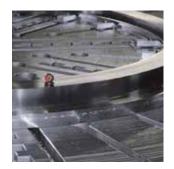


Applications

Inspection Build and adjust Reverse engineering

















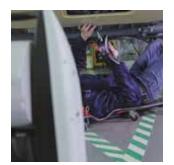


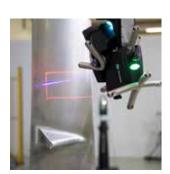














Absolute Tracker systems

12	1	Leica Absolute Tracker AT960
16	7	Leica Absolute Tracker AT930
16	7	Leica Absolute Tracker ATS600
17	1	Leica Absolute Tracker AT500

Overview



The Absolute Tracker

The foundation of absolute accuracy

The unmatched productivity and portability of the Absolute Tracker range is founded on innovative technologies that make it the pinnacle of high-performance metrology on the move.

Absolute accuracy

- The Absolute Interferometer (AIFM) combines the accuracy of an absolute distance meter (ADM) with the speed of an interferometer.
- Scanning accuracy to within as little as 50 microns.
- Reflector single-point accuracy to within 20 microns.
- Patented Absolute Encoders ensure angular accuracy performance with no referencing before use .
- Systems calibrated in ISO 170250-certified laboratories for accuracy specified in line with ISO 10360-10 standard.

Absolute productivity

- Non-contact measurement data collected at up to 1.2 million points and 300 lines per second.
- Orient-to-Gravity for levelling and alignment tasks.
- Ultra-large measurement volumes of up to 320 metres in diameter.
- Real-time architecture with dynamic performance delivers 1000 Hertz data rate.
- Hidden-point measurement with a wireless probe can reduce measurement process time by up to 80 percent.

Absolute reliability

- Integrated MeteoStation environmental monitoring unit.
- IEC-certified IP54 sealed unit for challenging environments. Wide operating temperature range of -15 to +50 degrees Celsius.
- Integrated mini variozoom delivers a constant field of view in any light conditions.
- Full 24-month factory warranty and guaranteed ten years of serviceability

Absolute portability

- All-in-one integrated design.
- Built-in WiFi with true access point functionality.
- Batteries compliant to IATA regulations.
- Independent hot-swappable battery power supply.
- Convenient flight cases for simple transportation.

Our laser trackers

A tracker for every application

Laser trackers come in a range of shapes and sizes and are based on various technological foundations. These are ours, and together they represent a wider range of application solutions than is offered by any other manufacturer.

Leica Absolute Tracker AT960

The flagship of the Absolute Tracker range, offering full 6DoF measuring functionality capable of powering both manual and automated inspection and production systems.

Leica Absolute Tracker AT930

Our premium 3D tracker, for high-accuracy reflector measurements that can support a range of applications.

Leica Absolute Tracker ATS600

The groundbreaking direct scanning laser tracker, delivering metrology-grade measurement from a distance of up to 60 metres.

Leica Absolute Tracker AT500

An ultra-long-range tracker designed for measurement anywhere and best-in-class usability.



Leica Absolute Tracker AT960

Key features





Overview camera

High-resolution display with live view and multiple zoom levels with no reduction in image quality



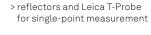
PowerLock

Interrupted line of sight automatically re-established with no user interaction



Multifunctionality

Compatible with:





> AS1, LAS and LAS-XL scanners for non-contact measurement





Real-time data output

1000 Hz low-latency Ethercat data transfer with the optional Real-Time Feature Pack



Hot-swappable battery power

Quick and easy cable-free setup in almost any location



Orient-to-gravity function

Allows for measurement with the Z-axis aligned to gravity – ideal for levelling and alignment tasks





Built-in WiFi

For simple set up and communication with the PC and remote control operation



Large volume

Measure within a volume up to 160 metres in diameter



IP54 protection

IEC-certified sealed unit guarantees ingress protection against dust and other contaminants



ISO certification

System traceability certified in line with ISO 17025



Real-time remote monitoring

Compatibility with HxGN SFx | Asset Management, the leading solution for of Industry 4.0 asset performance management



GPS location service

Possibility to track location of the Absolute Tracker anywhere in the world, even when it is switched off.

Leica Absolute Tracker AT960



576865 Leica Absolute Tracker AT960-SR

Short-range 6DoF laser tracker system based on Absolute Interferometer. Reflector measurement range up to 6 m, with probing range up to 5 m.

The system consists of:

- 6DoF laser tracker unit AT960-SR
- Calibration Certificate Metrology Gold (827624)
- MTC51 AT930/AT960/ATS600 Transport Container (576891)
- AT Controller (576871)
- MPS21 Power Supply Unit (576873)
- MCS11 Sensor Cable 1.5 m (576885)
- AT Quick Release Mount incl. Mandrel (576338)
- MCA18 External Temperature Sensor 2 m (576888)
- Red Ring Reflector 1.5"" (575784)
- MSI26 Universal Stand Fixture (576895)
- MAT33 Optical Cleaning Kit (576898)
- Protective Sensor Cover (827057)
- 24-month warranty*
- HxGN SFx | Asset Management PRO subscription included during warranty period.
- 50% discount on SFx ASM GPS Location Add-on device, including first-year location data plan subscription.

576864

Leica Absolute Tracker AT960-MR

Mid-range 6DoF laser tracker system based on Absolute Interferometer. Reflector measurement range up to 20 m, with probing range up to 10 m.

- 6DoF laser tracker unit AT960-MR
- Calibration Certificate Metrology Gold (827624)
- MTC51 AT930/AT960/ATS600 Transport Container (576891)
- AT Controller (576871)
- MPS21 Power Supply Unit (576873)
- MCS11 Sensor Cable 1.5 m (576885)
- AT Quick Release Mount incl. Mandrel (576338)
- MCA18 External Temperature Sensor 2 m (576888)
- Red Ring Reflector (RRR) 1.5" (575784)
- MSI26 Universal Stand Fixture (576895)
- MAT33 Optical Cleaning Kit (576898)
- Protective Sensor Cover (827057)
- 24-month warranty*
- HxGN SFx | Asset Management PRO subscription included during warranty period.
- 50% discount on SFx ASM GPS Location Add-on device, including first-year location data plan subscription.

Leica Absolute Tracker AT960

576863 Leica Absolute Tracker AT960-LR

Long-range 6DoF laser tracker system based on Absolute Interferometer. Reflector measurement range up to 80 m, with probing range up to 20 m.

The system consists of:

- 6DoF laser tracker unit AT960-LR
- Calibration Certificate Metrology Gold (827624)
- MTC51 AT930/AT960/ATS600 Transport Container (576891)
- AT Controller (576871)
- MPS21 Power Supply Unit (576873)
- MCS11 Sensor Cable 1.5 m (576885)
- AT Quick Release Mount incl. Mandrel (576338)
- MCA18 External Temperature Sensor 2 m (576888)
- Red Ring Reflector (RRR) 1.5" (575784)
- MSI26 Universal Stand Fixture (576895)
- MAT33 Optical Cleaning Kit (576898)
- Protective Sensor Cover (827057)
- 24-month warranty*
- HxGN SFx | Asset Management PRO subscription included during warranty period.
- 50% discount on SFx ASM GPS Location Add-on device, including first-year location data plan subscription.

576862 Leica Absolute Tracker AT960-XR

Extended-range 6DoF laser tracker system based on Absolute Interferometer. Reflector measurement range up to 80 m, with probing range up to 30 m.

- 6DoF laser tracker unit AT960-XR
- Calibration Certificate Metrology Gold (827624)
- MTC51 AT930/AT960/ATS600 Transport Container (576891)
- AT Controller (576871)
- MPS21 Power Supply Unit (576873)
- MCS11 Sensor Cable 1.5 m (576885)
- AT Quick Release Mount incl. Mandrel (576338)
- MCA18 External Temperature Sensor 2 m (576888)
- Red Ring Reflector (RRR) 1.5" (575784)
- MSI26 Universal Stand Fixture (576895)
- MAT33 Optical Cleaning Kit (576898)
- Protective Sensor Cover (827057)
- 24-month warranty*
- HxGN SFx | Asset Management PRO subscription included during warranty period.
- 50% discount on SFx ASM GPS Location Add-on device, including first-year location data plan subscription.



Leica Absolute Tracker AT930 | ATS600



576861 Leica Absolute Tracker AT930

3D laser tracker system based on Absolute Interferometer.

Reflector measurement range up to 80 m.

The system consists of:

- 3D laser tracker unit, AT930
- Calibration Certificate Metrology Gold (827624)
- MTC51 AT930/AT960/ATS600 Transport Container (576891)
- AT Controller (576871)
- MPS21 Power Supply Unit (576873)
- MCS11 Sensor Cable 1.5 m (576885)
- AT Quick Release Mount incl. Mandrel (576338)
- MCA18 External Temperature Sensor 2 m (576888)
- Red Ring Reflector 1.5" (575784)
- MSI26 Universal Stand Fixture (576895)
- MAT33 Optical Cleaning Kit (576898)
- Protective Sensor Cover (827057)
- 24-month warranty*
- HxGN SFx | Asset Management PRO subscription included during warranty period.
- 50% discount on SFx ASM GPS Location Add-on device, including first-year location data plan subscription.



Leica Absolute Tracker ATS600

Laser tracker system with direct scanning capability. Direct scanning distance range up to $60\,\mathrm{m}$, reflector distance range up to $80\,\mathrm{m}$.

- Scanning laser tracker unit ATS600
- Calibration Certificate Metrology Gold (878571)
- MTC51 AT930/960/ATS600 Transport Container (576891)
- ATS Controller (576981)
- MPS21 Power Supply Unit (576873)
- MCS11 Sensor Cable 1.5 m (576885)
- AT Quick Release Mount incl. Mandrel (576338)
- MCA18 External Temperature Sensor 2 m (576888)
- Red Ring Reflector (RRR) 1.5" (575784)
- MAC87 Reference Sphere d=90 mm (576947)
- MSI26 Universal Stand Fixture (576895)
- MAT33 Optical Cleaning Kit (576898)
- Protective Sensor Cover (827057)
- 24-month warranty*
- HxGN SFx | Asset Management PRO 12-month subscription
- GPS Location Add-on for SFx Asset Management 12-month subscription**
- HxGN SFx | Asset Management PRO subscription included during warranty period.
- 50% discount on SFx ASM GPS Location Add-on device, including first-year location data plan subscription.



Leica Absolute Tracker AT500



577440 Leica Absolute Tracker AT500

> 3D laser tracker system based on Absolute Distance Meter technology. The system consists of:

- Leica Absolute Tracker AT500 device
- Calibration Certificate Metrology Gold (963750)
- MTC135 Transport Container (577446)
- MPS134 Power Supply Unit (577407)
- 2 X GEB364 Batteries (954519)
- AT Remote Control 400 (576379)
- AT Quick Release Mount incl. Mandrel (576338)
- MCA18 External Temperature Sensor 2 m (576888)
- MCA134 LAN-Cable RJ-45 Cat6 (575899)
- Red-Ring Reflector (RRR) 1.5" (575784)
- MSI26 Universal Stand Fixture (576895)
- MAT33 Optical Cleaning Kit (576898)
- Protective Sensor Cover (827057)
- 24-month warranty*
- HxGN SFx | Asset Management PRO subscription included during warranty period
- 50% discount on SFx ASM GPS Location Add-on device, including first-year location data plan subscription
- 12-month licence for Inspire portable metrology software

^{*}The 24-month factory warranty period is conditional on the performance of annual maintenance and calibration.

^{**}Available in specific countries



Scanning solutions

Absolute Scanner AS1 20

Leica T-Scan 5

20

Absolute Scanner LAS | LAS-XL

21

Bundles

22

Absolute Scanner AS1 | Leica T-Scan 5



577366 Absolute Scanner AS1 Kit

High-speed 3D laser scanner for arm and tracker, manual and automated

The system consists of:

- Absolute Scanner AS1 (577367), incl. Certificate
- Absolute Positioner AP21 (577369)
- MAP102 Grip (577370)
- AT Connect Box CB21 (577377)
- MCA110 Positioner Sensor Cable 10 m (577379)
- MCA24 Battery Cable 0.75 m (576876)
- MCA114 Trigger/Probe Cable 0.75 m (855240)
- MCA115 LAN-cable RJ-45 Cat6 0.75 m (577384)
- MAC133 Reference Sphere d=25.4 mm (577401)
- MAP116 Positioner Horizontal Holder (577385)
- MAP117 Positioner Clip Support (577386)
- MSI26 Universal ATC Stand Fixture (576895)
- MTC118 Absolute Scanner Trolley Case (577387)
- 24-Month Warranty*

Compatibility: AT960



577368 Absolute Positioner AP21 Kit

Absolute Positioner AP21 Kit

The Absolute Positioner AP21 Kit consists of:

- Absolute Positioner AP21 (577369), incl. Certificate
- MAP102 Grip (577370)
- AT Connect Box CB21 (577377)
- MCA110 Positioner Sensor Cable 10 m (577379)
- MCA24 Battery Cable 0.75 m (576876)
- MCA114 Trigger/Probe Cable 0.75 m (855240)
- MCA115 LAN-cable RJ-45 Cat6 0.75 m (577384)
- MAP116 Positioner Horizontal Holder (577385)
- MAP117 Positioner Clip Support (577386)
- MSI26 Universal ATC Stand Fixture (576895)
- MTC118 Absolute Scanner Trolley Case (577387)
- 24-Month Warranty*

Compatibility: AT960

^{*}The 24-month factory warranty period is conditional on the performance of maintenance and recertification. This must be performed at your local Hexagon Service Center between the 10th and 14th month following the delivery of the system.

Leica T-Scan 5 | Absolute Scanner LAS | LAS-XL



576187 Leica T-Scan 5

3D laser line scanner for AT960 systems.

The system consists of:

- 3D laser scanner unit T-Scan 5 incl. transport- ation case
- Scanner Sensor Cable 10 m
- Scanner Controller (Rev.2.0)
- MPS21 Power Supply Unit (576873)
- MCA47 Trigger/Probe Cable 2m (576903)
- LAN-cable RJ-45 2 m
- MAP39 Horizontal Scanner Holder (576188)
- MAC41 Reference Sphere d=50 mm (576190)
- T-Collect Interface Software

Compatibility: AT960



576908 Leica Absolute Scanner LAS

3D laser line scanner for AT960 systems.

The system consists of:

- 3D laser scanner unit LAS
- LASC-211 Scanner Controller (576909)
- MCA62 Scanner Sensor Cable 10 m (576911)
- MPS21 Power Supply Unit (576873)
- LAN-cable RJ-45 5 m (575899)
- MCA47 Trigger/Probe Cable 2 m (576903)
- MAC64 Reference Sphere d=30 mm (576913)
- MAC74 Reference Sphere Support (576923)
- MAP65 Horizontal Holder (576914)
- MTC61 LAS Transport Case (576910)

Compatibility: AT960



576943 Leica Absolute Scanner LAS-XL

3D laser tracker system based on Absolute Distance Meter.

Reflector measurement range up to 160 m, with probing measurement range up to 10 m.

The system consists of:

- 3D laser scanner unit LAS-XL
- LASC-211 Scanner Controller (576909)
- MCA63 Scanner Sensor Cable 20 m (576912)
- MPS21 Power Supply Unit (576873)
- LAN-cable RJ-45 5 m (575899)
- MCA47 Trigger/Probe Cable 2 m (576903)
- MAC87 Reference Sphere d=90 mm (576947)
- MAP65 Horizontal Scanner Holder (576914)
- MTC85 LAS-XL Trolley Case (576944)

Compatibility: AT960

Scanner bundles



6012677

Leica Absolute Tracker AT960-SR and T-Scan 5 Bundle

Short-range 6DoF Absolute Tracker system bundled with Leica T-Scan 5. Reflector measurement range up to 6 m and scanning range up to 5 m.

The system consists of:

- Leica Absolute Tracker AT960-SR (576865)
- Leica T-Scan 5 (576187)

576864

Leica Absolute Tracker AT960-SR and LAS Bundle

Short-range 6DoF Absolute Tracker system bundled with Leica Absolute Scanner LAS laser scanner. Reflector measurement range up to 6 m and scanning range up to 5 m.

The system consists of:

- Leica Absolute Tracker AT960-SR (576865)
- Leica Absolute Scanner LAS (576908)

6013319

Leica Absolute Tracker AT960-SR and LAS-XL Bundle

Short-range 6DoF Absolute Tracker system bundled with Leica Absolute Scanner LAS-XL laser scanner. Reflector measurement range up to 6 m and scanning range up to 5 m.

- Leica Absolute Tracker AT960-SR (576865)
- Leica Absolute Scanner LAS-XL (576943)

Scanner bundles



576955

Absolute Scanner Bundle (LAS + LAS-XL)

Pair of complemetary 3D laser line scanners for AT960 systems.

Bundle consists of:

- Leica Absolute Scanner LAS (576908) and Leica Absolute Scanner LAS-XL (576943)
- LASC-211 Scanner Controller
- MCA63 Scanner Sensor Cable 20 m
- MPS21 Power Supply Unit
- LAN-cable RJ-45 5 m and MCA47 Trigger/Probe Cable 2 m
- MAC87 Reference Sphere d=90 mm and MAC64 Reference Sphere d=30 mm
- 2x MAP65 Horizontal Scanner Holder and MAC74 Reference Sphere Support
- MTC90 LAS/LAS-XL Trolley Case

Compatibility: AT960



Probing solutions

Leica T-Probe

B-Probe^{Plus}

Styli and extensions

27

26

26

Leica T-Probe | B-Probe Plus



576186 Leica T-Probe III

Portable wireless probing system for AT960 systems. A light-weight measurement probe with configurable function buttons allows measurements in small and large measurement volumes with minimal preparation time. The measurement range of the T-Probe is up to 30 metres in all directions.

The system consists of:

- Wireless probing sensor T-Probe (576186) incl. certificate and transport case
- T-Probe Stylus Adaptor -M5 (576212)
- Ruby Ball Stylus d=6 mm -M5 (576221)
- 2x Stylus Tool for M5 Threaded Styli (576225)
- MAC34 T-Probe Stylus Compensation Tool (576899)
- Power Supply for T-Probe Battery (734195)
- 2x T-Probe Spare Battery (575983)

Compatibility: AT960



577477 B-Probe^{plus}

Entry-level portable wireless probing solution for the Absolute Tracker AT500.

The B-Probe^{plus} consists of:

- B-Probeplus device
- 55 mm 0.5" Steel Ball Stylus (576514)
- MAP59 100mm M5 Stylus Extension (576517)
- B-Probe^{plus} Stylus Compensation Tool (576512)
- Battery charger and 4 x AAA batteries
- Transportation case
- 24-month warranty*

Compatibility: AT500



6017710 AT500 Probing System

Absolute Tracker AT500 laser tracker bundled with B-Probeplus.

- Leica Absolute Tracker AT500 (577440)
- B-Probe^{plus} (577477)

^{*}The 24-month factory warranty period is conditional on the performance of annual maintenance and recertification.

Styli and extensions



576231 T-Probe styli kit

Recommended styli kit for Leica T-Probe

The kit consists of:

- Scribe Stylus r=0.1 mm M2 (576219)
- Ruby Ball Stylus d=3 mm M5 (576220)
- Ruby Ball Stylus d=6 mm M5 (576221)
- Ceramic Hemispherical Stylus d=0.5 in, M5 (576143)
- Ceramic Hemispherical Stylus d=1.5 in, M5 (576144)
- Stylus Extension 100 mm M5 carbon fibre stem d=20 mm (576213)
- Stylus Extension 200 mm M5 carbon fibre stem d=20 mm (576214)
- Stylus Extension 40 mm M5 carbon stem d=11 mm (576217)
- 2x T-Probe Stylus Adaptor M5 (576212)
- 2x Stylus Tool for M2-M3 Threaded Styli (576223)
- 2x Stylus Tool for M5 Threaded Styli (576225)
- Stylus Adaptor M5-M2 (576226)
- T-Probe Styli Kit Case for Standard Configuration (576211)



576211

T-Probe Styli Kit Case for Standard Configuration

Only case included. Accessories to be ordered separately.



576212

T-Probe Stylus Adaptor - M5

Precision quick release adaptor for T-Probe styli to remove and attach styli without recalibration.

The stylus adaptor has built-in intelligence supporting stylus self-identification.



Stylus Extension

576213	100 mm - M5 - carbon fibre - stem d=20 mm
576214	200 mm - M5 - carbon fibre - stem d=20 mm
576215	400 mm - M5 - carbon fibre - stem d=20 mm
576216	600 mm - M5 - carbon fibre - stem d=20 mm
576217	40 mm - M5 - carbon fibre - stem d=11 mm
576218	100 mm - M5 - carbon fibre - stem d=11 mm

Styli and extensions

0	576219	Scribe Stylus - r=0.1 mm - M2 Compatibility: AT960
S. Car	576220	Ruby Ball Stylus - d=3 mm - M5 Compatibility: AT960
	576221	Ruby Ball Stylus - d=6 mm - M5 Compatibility: AT960
e i	576248	Cylindrical Stylus 22.5 mm - d=3 mm - M2 Compatibility: AT960
999	576222	Edge Stylus M5 Comes with edge sphere 0.5", magnetic stylus M5 and compensation sphere 0.5". Compatibility: AT960
	576223	Stylus Tool for M2 and M3 Threaded Styli Compatibility: AT960
	576224	Stylus Tool for M4 Threaded Styli Compatibility: AT960
	576225	Stylus Tool for M5 Threaded Styli Compatibility: AT960

Styli and extensions

	576226	M5/M2 Stylus Adaptor An adaptor for connecting M2-threaded styli to a M5 connector. Compatibility: AT960
	576227	M5/M4 Stylus Adaptor An adaptor for connecting M4-threaded styli to a M5 connector. Compatibility: AT960
3	576228	M4/M5 Stylus Adaptor An adaptor for connecting M5-threaded styli to a M4 connector. Compatibility: AT960
		Ceramic Hemispherical Compatibility: AT960
8	576143 576144	Stylus d=0.5" - M5 Stylus d=1.5" - M5
·	576403	Punch Tool - M5 A stylus used for punching scribe lines on an object for the next manufacturing process.
	576408	Punch Tool Replacement Tip Replacement Tip for Punch Tool - M5 (576403).
	577356	90Deg. Adapter for T-Probe 90-degree adaptor with M5f/M5m thread. Compatible with all M5 stylus and CFK extensions. Used for 90-degree stylus configurations with Leica T-Probe.
C. C.	576514	Steel Ball Stylus M5 d=0.5" - L=55 mm



Automation solutions

Leica T-Mac

32

Accessories

34

Leica T-Mac



576400

T-Mac Basic TMC30-B

T-Mac is a specific developed sensor using Hexagon's 6DoF technology to extend product offering. T-Mac is designed to be used in combination with robots and large machines especially for positioning with high accuracy. T-Mac has the possibility to mount it on a robot or machine and the housing already has 4 reflector nests included. These reflector positions can be used to establish a local coordinate system for object orientation or robot alignment. As an option a tool exchange interface from Sandvick can be adapted.

The system consists of:

- T-Mac basic TMC30-B (576400) including certificate and transportation case
- T-Probe cable 20 m (575973)



T-Mac Inspect TMC30-I

The T-Mac is a 6DoF machine control probe for use with the Absolute Tracker AT900 series trackers and T-Cam's. The TMC30-I is the deluxe version of the probe for machine positioning, alignment, calibration and all inspection tasks (such as touch trigger).

The system consists of:

- T-Mac Inspect TMC30-I (576410) including certificate and transportation case
- T-Probe Cable, 20 m (575973)

Note: The T-Mac Inspect cable must be ordered separately (10 m - 576509, 30 m - 576510).

Compatibility: AT960

576404

T-Mac Update Kit Basic to Inspect

This Kit allows older T-Mac's to be upgraded in order to be used in new inspection systems.

The Upgrade Kit only contains the internal hardware to convert a TMC30 to a TMC30-I, no additional cables or interfaces are included.

Please contact service to make sure that the existing T-Mac is capable of receiving this upgrade.

Note: T-Mac Inspect cable must be ordered separately.

Compatibility: AT960



576396

Leica T-Mac Multiface TMC30-M

The T-Mac Multiface is a 6DoF machine control probe for use with any 6 DoF laser tracker. The TMC30-M is the multiface version of the TMC30-I for machine positioning, alignment, calibration and all inspection tasks (such as touch trigger measurement).

The system consists of:

- TMC30-M sensor, including certificate and transportation case
- Leica T-Probe cable 20 m (575973)

Note: T-Mac Inspect cable (576509, 576510) must be ordered separately.

Compatibility: AT960

Leica T-Mac



576398 T-Mac Frame TMC30-F

The T-Mac Frame TMC30-F is a configurable 6DoF machine control probe for use with any Hexagon 6 DoF Lasertracker. The TMC30-F can be used to create customised multisided probe configurations with anywhere from 1 to 4 frames (faces). The T-Mac Frame TMC30-F can be used to extend angular measuring range of the T-Mac Frame TMC30-F Starter Kit (576397) or an existing T-Mac Basic TMC30-B (576400) or T-Mac Inspect TMC30-I (576410). For TMC30-B or TMC30-I the Frame extension interface for T-Mac (5003434) is needed (orderable from Laser Tracker Service Unterentfelden, Switzerland, please contact ps.ch@hexagonmetrology.com).

The system consists of:

- T-Mac Frame TMC30-F (576398) incl. certificate and cardboard transportation box
- Connection Cable T-Mac/CPU Box, 0.6 m or 1.8 m (804823, 804824)

Note: The T-Mac Frame TMC30-F does NOT include a mount for touch trigger inspection device. Please refer to 576395 Upgrade TMC30-F to Inspect.

Compatibility: AT960



576397 T-Mac Frame TMC30-F Starter Kit

The T-Mac Frame TMC30-F Starter Kit is a configurable 6DoF machine control probe for use with any Hexagon 6 DoF Laser tracker. The T-Mac TMC30-F Starter Kit can be used to create customised multisided probe configurations with anywhere from 1 to 4 frames (faces). To the T-Mac Frame TMC30-F Starter Kit up to 3 additional T-Mac Frames TMC30-F (576398) can be connected in addition.

The system Kit consists of:

- T-Mac Frame TMC30-F (576398) incl. certificate and cardboard transportation box
- CPU Box for TMC30-F (805143)
- T-Probe Cable, 20 m (575973)
- Connection Cable T-Mac/CPU Box, 0.6 m or 1.8 m (804823, 804824).

Compatibility: AT960



875900 Automation Frame T-Probe III

The Automation Frame T-Probe consists of:

- Leica T-Probe III (576186)
- Automation Frame

The Automation Frame is factory fitted on the T-Probe III. The Automation Frame enables wireless 6DoF use cases involving fixing the T-Probe III on a robot.

Accessories for automation solutions



576406 **Automation Interface Controller**

The Automation Interface Controller provides handling capabilities of up to four laser trackers and multiple measurement devices such as T-Mac. T-Scan or external trigger source. Its digital I/O interface allows for bidirectional communication to a robotic or machine controller.

Includes: Product CD. power cable and 5 m LAN cable (575899).

Compatibility: AT930, AT960



Automation Switch Controller MAA99

The Automation Switch Controller (ASC) is a device for automatically switching the probe and probe/trigger cable from one tracker to another and/or from one target to another. The ASC provides four pairs of probe and probe/trigger sockets for laser tracker connections and four pairs of probe and probe/trigger sockets for target (probe) connections. The ASC is a device that enables the use of multiple laser trackers and accessories in any combination, for example a Leica T-Scan 5 or Leica T-Mac could be connected to different laser trackers to optimise accessibility. Sample setup with two laser trackers and two T-Scan systems: the connection between a T-Scan system and a laser tracker is a simple probe/trigger cable. If two T-Scan systems and two laser trackers are used simultaneously, each laser tracker can only measure on the T-Scan that is physically connected to its controller by a probe/ trigger cable. If it is required that each of the laser trackers in such a system be able to measure with each of the scanners, an ASC is needed.

Compatibility: AT960

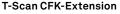


576872 RTFP-EC Real Time Feature Pack - EtherCAT

The Real Time Feature Pack (RTFP) for AT930/960 Absolute Tracker (AT Controller) is designed to provide cyclic measurement data in real-time over the EtherCAT industrial fieldbus protocol. The RTFP acts as a slave in the external automation bus system.

Note: The RTFP can be fitted in the factory or service Unterentfelden only.

Compatibility: AT930, AT960



To scan hidden areas based on external mounted T-Mac frames.

It includes the mechanical interface to mount a T-Scan 5 and all mounting adapters for a T-Mac TMC30 starter kit and 3 additional T-Mac TMC30 frames. These frames have to be ordered separately.

576959 576960 576961

T-Scan CFK-Extension 400 T-Scan CFK-Extension 550 T-Scan CFK-Extension 700

576964

Accessories for automation solutions



577373 Interface Adaptor AP21 - MAA105

Consisting of:

- MAA105 Interface Adaptor AP21 (577373)
- Torque wrench 2.0 Nm (928792)
- Screw Set 8 x M4 x 14 12.9 ISO 4762
- MAA Autom. Adaptor Instruction Sheet-EN (939299)

Compatibility: AT960, AS1



577374 Straight Adapter - 139 mm - MAA106

Consisting of:

- MAA106 Straight Adaptor 139 mm (577374)
- MAA Autom. Adaptor Instruction Sheet-EN (939299)

Compatibility: AT960, AS1



577375 **45° Adaptor - 67 mm - MAA107**

Consisting of:

- MAA107 45° Adaptor 67 mm (577375)
- Screw Set 3 x M4 x 25 ISO 4762
- MAA Autom. Adaptor Instruction Sheet-EN (939299)

Compatibility: AT960, AS1



577376 ToolChanger/Robot Flange - MAA108

Consisting of:

- MAA108 ToolChanger/Robot Flange (577376)
- Screw Set 8 x M4 x 10 ISO 4762
- MAA Autom. Adaptor Instruction Sheet-EN (939299)

Compatibility: AT960, AS1



577411 MAA142 Automation WRTL single unit

The Automation WRTL (Wireless Real Time Link 2.4GHz) kit enables wireless scanning applications by transmitting trigger signals and probe data between the Leica Absolute Tracker AT960 and the Absolute Scanner AS1. The WRTL device connects on one side to the laser tracker AT Controller and on the other side to the laser scanner's AT Connect Box CB21.

For a wireless automation configuration, 2 MAA142 Autom. WRTL devices and 2 MCA114 Trigger/Probe Cables (855240) are required. The second MMA142 and the cables must be ordered separately.

Compatibility: AT960, AS1

Accessories for automation solutions



577412 MAA142 Automation WRTL kit

The kit consists of:

- 2x MAA142 Autom. WRTL (577411)
- 2x MCA114 Trigger/Probe Cable 0.75m (855240)

Compatibility: AT960, AS1



577378 Top Hat Rail Adaptor - MAA109

Adaptor can carry the following articles:

- AT Connect Box CB21 (577377)
- AT Controller (576871)
- MPB25 Battery (576875), MPB100 Battery (576965)
- MAS71 Power Supply Unit Fixture (576920)

Adaptor is compatible with the following top hat rails:

- IEC/EN 60715 - 35×7.5 and IEC/EN 60715 - 35×15

Compatibility: AT960, AS1



Automation GigE-Data Cable

Cable for connecting the Automation Signal Splitter GigE/Probe (577396) to a robot adaptor and tool changer. The cable is equipped with M12 x-coded male plugs. To extend the cable length a MCA128 Automation M12 Gender Changer - F (577397) is required (to be ordered separately). The maximum supported cable length is 80 m with up to maximum 6 plug connections. The cable is green.

577388 MCA119 - 10 m 577389 MCA120 - 30 m 577390 MCA121 - 50 m

Compatibility: AT960, AS1



Automation Probe-Data Cable

Cable for connecting the Automation Signal Splitter GigE/Probe (577396) to a robot adaptor and tool changer. The cable is equipped with M12 x-coded male plugs. To extend the cable length a MCA128 Automation M12 Gender Changer - F (577397) is required (to be ordered separately). The maximum supported cable length is 80 m with up to maximum 6 plug connections. The cable is black.

577391 MCA122 - 10 m 577392 MCA123 - 30 m 577393 MCA124 - 50 m

Compatibility: AT960, AS1

Accessories for automation solutions



577394 Automation GigE-Data Cable MCA125 - 0.5 m

Cable for connecting the tool changer (robot side) and the robot adaptor (577371, 577372). The cable is equipped with M12 x-coded male plugs. The cable has a length of 0.5 m and is green.

Compatibility: AT960, AS1



577395 Automation Probe-Data Cable MCA126 - 0.5 m

Cable for connecting the tool changer (robot side) and the robot adaptor (577371, 577372). The cable is equipped with M12 x-coded male plugs. The cable has a length of 0.5 m and is black.

Compatibility: AT960, AS1



577397 Automation M12 Gender Changer - F MCA128

Gender Changer connects any of the Automation GigE- or Probe-Data Cables (577388-577395). It's used to extend the cable configuration. The two Automation M12 Gender Changer - F have M12 x-coded female sockets and are delivered with a wall bracket

Compatibility: AT960, AS1



577399

Automation Robot I/O Cable 577398

Cable for connecting the AT Connect Box CB21 (577377) with the robot or NC machine controller. The cable has a Lemo Type B plug (CB21 side) and 19 open wires labelled (robotic side).

MCA129 - 20 m MCA130 - 50 m

Compatibility: AT960, AS1

The automation accessories shown in this catalogue are only a selection of the larger range of solutions offered. For detailed system configurations (e.g. machine adaptors, cables, etc.), please contact your local commercial operation or system integrator.

Accessories for automation solutions



576192 Automation Trigger Cable MCA37 - 2 m

The MCA37 Automation Trigger cable connecting the T-Scan 5 Controller to the Automation Interface Controller (576406).

Compatibility: AT960, T-Scan 5



576193 T-Scan Sensor Extension Cable MCA38 - 10 m

Cable providing an extension of 10 m, resulting in a total T-Scan 5 cable length configuration of 20 m (10 m \pm 10 m).

Compatibility: AT960, T-Scan 5



576194 T-Scan Controller Automation Cable MCA42 - 2 m

Cable, length 2 m, for connecting the T-Scan 5 Controller (819828) to the Automation Interface Controller (576406).

Compatibility: AT960, T-Scan 5



576196 Automation Sensor Cable MCA44 - 10 m

The MCA44 Automation Sensor Cable 10 m connecting the T-Scan 5 or T-Mac Inspect (22pin T-Scan ODU-female connector) to the Automation Interface Controller (576406) or to the Automation Multiplex Box (576407).

Compatibility: AT960, T-Scan 5, T-Mac



T-Scan Sensor Automation Cable

Cable for connecting the T-Scan 5 (T-Scan ODU-female connector) to the T-Scan 5 Controller (819828).

Note: The MCA76 can also be used as a T-Scan Sensor Extension Cable.

576928 MCA76 - 30 m **576197** MCA45 - 50 m

Compatibility: AT960, T-Scan 5

Accessories for automation solutions



T-Mac Inspect TMC30-I Cable

For connecting the TMC30-I to the Automation Interface Controller 576406 or MUX box 576407 directly.

576509 10 m **576510** 30 m

Automation Robot Cable

For Connecting the Automation Interface Controller 576406 to the Robotic or NC Machine controller

576505 20 m **576506** 50 m



576878 Automation Trigger/Probe Y-Cable MCA48

The MCA48 connecting the AT960 Tracker Controller with the Automation Interface Controller (576406). The y-ends of the cable must be extended with the standard T-Probe Cable (575972, 575973, 576185) and Trigger Cable (576507, 576508) > to be ordered separately.

Automation Interface Cable

connecting the Automation Interface Controller (576406) to the Automation Multiplex Box (576407).

576929 MCA77 - 30 m **576879** MCA49 - 50 m

576931 T-Mac cable MCA78 - 1.0 m

with ODU connector (male sensor side)



577396 Autom. Signal Splitter GigE/Probe MCA127

Cable junction for separating GigE and probe data. The splitter is equipped with M12 x-coded female sockets. The sockets are colour coded green/black for GigE/Probe cables. The splitter plugs into the scanner socket of the AT Connect Box CB21 (577377).

Compatibility: AT960



Mounting solutions

Tracker mounting solutions

42

Scanner holders

49



6009768 Stand Set MST27

Set consists of

- MST27 Stand Tube Extension (576881)
- Absolute Tracker Stand (575997)

Note: 235-5 Instrument Adaptor 577261 (3.5" to 5/8" thread) from Brunson required to mount AT40x sensors (not included).

Compatibility: AT500, AT930, AT960, ATS600



576881 Stand Tube Extension MST27

Designed for AT930/960 or ATS600 systems. Fits on the Absolute Tracker Stand (575997) (to be ordered separately).

Compatibility: AT930, AT960, ATS600



575997 **Absolute Tracker Stand**

Equipped with three levelling screws and shock absorbing wheels.





576901 Portable Metrology Tripod MST36

Collapsible tripod with carbon legs designed for Absolute Tracker and Absolute Arms.

Tripod consists of:

- Integrated bulls eye level and 1 kit of pad feet
- Instrument adaptor for AT930/960 or Absolute Arm (3.5"x8 thread) and for AT40x (5/8" thread)
- 3 integrated fixture positions for AT Controllers (576871, 576368) or MPB25, battery external Li-lon 37V/8.1Ah (576875)

Adjustable height: 83 - 118 cm. | Weight: 14.2 kg

Compatibility: AT500, AT930, AT960, ATS600



576904 Tripod Wheel Assembly Kit MAS52

Offers additional portability for the MST36 Tripod (576901). The wheels are engaged and disengaged simply by unlocking the telescoping leg and rotating it, putting the wheel in an upper or lower position.

Note: The wheel options must be installed at the factory and should be ordered together with the tripod.

576919

Tripod Levelling Kit MAS70

Used on MST36 Tripod (576901) to establish a gravity-based coordinate system when measurements require a 3D device. Installation requires a simple hand adjustment to insert the levelling screw above the point or pad foot on each leg. The compact design adds only 17 mm of leg length in the retracted position while providing a large 19 mm precision adjustment range. Sold in sets of 3. Weight: 0.3 kg each

Note: Wheel Assembly Kit (576904) will not operate with the Tripod Levelling it installed.



576905 Tripod Transportation Kit MAS53

When shipping or packing requirements call for more protection, the MAS53 Tripod Transportation Kit nests the MST36 Protable Metrology Tripod (576901) and MAS54, Tripod Padded Bag (576906) into an ATA rated travel case for easy and safe transportation. This black injection molded plastic case has tilt wheels with a tow handle for easy pull-behind transport. A padlockable watertight lid is included for added security. Dimensions (outside): 114.5 cm x 40.6 cm x 33.0 cm. Weight (empty): 5.9 kg.

Compatibility: AT500, AT930, AT960, ATS600



Tripod Padded Bag MAS54

Add a durable black carrying bag for easy transport to and from the jobsite. This rugged nylon bag has padded sides and a structured bottom to protect the stand and accessories. Three convenient carrying options include handles, a shoulder strap, and built-in wheels with a tow handle. The wide mouth, double zippered opening makes for easy packing and unpacking.



577420 I

MST138 Portable Precision Tripod

Ideal lightweight carbon tripod for AT930/960, AT500, ATS600 and Measurement Arms. Use 5/8" Instrument Adapter (577422) for TM6100A theodolite.

- Thread: 3.5x8"
- Min. height: 79 cm
- Max. height: 131 cm
- Weight: 14.5 kg
- Max. load: 100 kg

Compatibility: AT500, AT930, AT960, ATS600, TM6100A



577421

MST139 Aluminium Precision Tripod

Ideal aluminium tripod for with AT930/960, AT500, AT5600 and Measurement Arms. Use 5/8" Instrument Adapter (577422) for TM6100A theodolite.

- Thread: 3.5x8"
- Min. height: 79 cm
- Max. height: 131 cm
- Weight: 14.5 kg
- Max. load: 100 kg

Compatibility: AT500, AT930, AT960, ATS600, TM6100A



577423

MAS141 Tripod Transportation Case

Lockable shipping and storage container with padded foam inlay for MST138/139 tripods.

- Dimensions: 41 x 33 x 98 cm
- 9.5 kg
- Foam inlay included



576920 **Power Supply Unit Fixture MAS71**

Fixture to hold a power supply unit by attaching to the stand, keeping the power supply off the ground. Holds the following power supply units:

- MPS21 Power Supply Unit (576873)
- AC/DC Adapter 15V (773058)

Attaches to following stands/fixtures: MST27 Stand Tube Extension (576881), MST36 Portable Metrology Tripod Carbon (576901), MSI26 Universal ATC Stand Fixture (576895)



576895 Universal ATC Stand Fixture MSI26

Universal stand fixture for AT Controller with reusable Velcro strap (0.52 m). Compatible with AT Controller (576871, 576368), ATS Controller (576981), MPB25, Battery external Li-Ion 37V/8.1Ah (576875)



576952 Levelling Unit MAL93

Used to support the fine levelling process for the Orient-to-Gravity setup. Equipped with two fine-adjust elements (90°-oriented) to adjust the laser tracker's inclination. The MAL93 can be mounted on any compatible instrument stand with a 3.5"x8 thread. The AT Quick Release Mount (576338) is attached to the upper MAL93 interface to fix the laser tracker in place.

Compatibility: AT500, AT930, AT960, ATS600 (reduced motor servo control loop parameters are required)



576338 AT Quick Release Mount

For mounting an AT9x0 or AT901 system on the AT Stand Extension (576337), AT Mounting Plate (576336) or any other compatible instrument stand with 3.5"x8 thread adaptor.



576349

Aluminium Tripod AT08

Light-weight tripod with 3.5"x8 thread for increased portability. Suitable for Absolute Tracker systems and Absolute Arm systems up to 3.5 m length. The tripod interface is compatible with the AT Quick Release Mount (576338).

Tripod height (working position): 815 mm (fixed) Dimensions: $25 \times 25 \times 100$ cm (folded) | Weight: 12 kg

Note: 235-5 Instrument Adaptor 577261 (3.5" to 5/8" thread) from Brunson required to mount AT40x sensors (not included).

Compatibility: AT500, AT930, AT960



575837

Tripod Adaptor

To be used for various alignment or compensation measurements. Thread for tripod 5/8"". Bore hole 12 mm (supports 577104/577208, not included)

Compatibility: AT500, AT930, AT960, ATS600



577351 AT Base Plate Type A

Base plate with non-adjustable pointed-tip feet for AT500, AT930/AT960 and ATS600 sensor series. Adaptation 5/8" thread and borehole pattern for Quick Release Adaptor. Quick Release Adaptor not included. All stainless-steel finish. Plate height: approx. 40 mm | Weight: 9 kg.

Compatibility: AT500, AT930, AT960, ATS600



577352 AT Base Plate Type B

Base plate with adjustable machine feet for levelling for AT500, AT930/960 and ATS600 sensor series. Adaptation 5/8" thread and borehole pattern for Quick Release Adaptor. Type B is delivered with non-slip rubber-type machine feet. Quick Release Adaptor not included. All stainless-steel finish. Plate height: approx. 60 mm | Weight: 10 kg.

Compatibility: AT500, AT930, AT960, ATS600



577353 AT Base Plate Type C

Base plate with adjustable machine feet for levelling for AT500, AT930/AT960 and ATS600 sensor series. Adaptation 5/8" thread and borehole pattern for Quick Release Adaptor. Type C is delivered with stainless-steel type machine feet. Quick Release Adaptor not included. All stainless-steel finish. Plate height: approx. 60 mm | Weight: 10 kg.

Compatibility: AT500, AT930, AT960, ATS600



577354 AT Base Plate Type D

Base plate with adjustable machine feet for levelling for AT500, AT930/AT960 and ATS600 systems. Adaptation 5/8" thread and borehole pattern for Quick Release Adaptor. Type D is delivered with pointed-tip feet. Quick Release Adaptor not included. All stainless-steel finish.

Plate height: approx. 60 mm | Weight: 9.5 kg.

Compatibility: AT500, AT930, AT960, ATS600



577355 Pointed Screw Kit for AT Base Plates - 80 mm

Conversion kit with pointed-tip feet for Base Plate Types B and C. Stainless steel.



576336 AT Mounting Plate

Allows for mounting Absolute Tracker systems onto machine beds. Does not include AT Quick Release Mount (576338).

Compatibility: AT500, AT930, AT960, ATS600



576339 AT Magnetic Mount

Allows for mounting Absolute Tracker systems onto a magnetic surface. Does not include AT Quick Release Mount (576338) and AT Mounting Plate (576336).

Compatibility: AT500, AT930, AT960, ATS600



576897 Rack Fixture MAA32 ATC 19"

Designed to hold the AT Controller of the AT930/960 series or ATS Controller of the ATS600 in standard 19"-rack systems.



576940 Wall Mount Fixture 0°/180° MAS80

Fixture for upright or inverted adaptation of Absolute Tracker systems onto concrete walls or structures. Adaptation of Leica Quick Release for AT930/960 or ATS600, or 5/8" thread for AT500. Integrated safety lever for Quick Release handle.

Fixture contents:

- MAS80 Wall Mount
- Set of screws for adaptation of Quick Release and washers and heavy duty anchors for concrete walls
- Set of cable ties for sensor cables
- 5/8" threaded bolt for AT40x sensors

Compatibility: AT500, AT930, AT960, ATS600



576941 Wall Mount Fixture 35° MAS81

Fixture for inclined installation of AT930/960/ATS600 sensors onto concrete walls or structures. Adaptation of Leica Quick Release for AT930/960/ATS600 systems. Integrated safety lever for Quick Release handle.

Fixture Content:

- MAS81 Wall Mount
- Set of screws for adaptation of Quick Release, washers and heavy duty anchors for concrete walls
- Set of cable ties for sensor cables

Compatibility: AT500, AT930, AT960, ATS600

Scanner holders



576188 Horizontal Scanner Holder MAP39

For holding the Leica T-Scan 5 scanner at a horizontal orientation.

Compatibility: T-Scan 5



577385 Horizontal Positioner Holder MAP116

Horizontal Positioner holds the Absolute Positioner AP21 with its sensor attached in a safety position.

Compatibility: AS1



577386 Positioner Clip Support MAP117

Positioner Clip clips to the MAP102 Grip and holds the Absolute Positioner AP21 with its sensor attached in a temporary position.

Compatibility: AS1



576914 Horizontal Scanner Holder MAP65

For holding the scanner at a horizontal orientation.

Compatibility: LAS



Reflectors and holders

Reflectors

Reflector holders

56



575784 Red Ring Reflector (RRR) - 1.5"

Stainless steel, surface-hardened, magnetic corner-cube reflector with removable ring, protective cover for optics and certificate. Delivered in wooden box.

Compatibility: AT500, AT930, AT960, ATS600



576311 Red Ring Reflector (RRR) - 7/8"

Stainless steel, hardened, magnetic corner-cube reflector with removable ring, protective cover for optics and certificate. Delivered in wooden box.

Compatibility: AT500, AT930, AT960, ATS600



575739 Red Ring Reflector (RRR) - 0.5"

Stainless steel, surface-hardened, magnetic, corner-cube reflector with removable ring, protective cover for optics and certificate. Delivered in wooden box.

Compatibility: AT500, AT930, AT960, ATS600



576244 Break Resistant Reflector (BRR) - 1.5"

Stainless steel, surface-hardened, magnetic reflector with collar protection cover for optics and certificate. Delivered in wooden box.

Compatibility: AT500, AT930, AT960, ATS600

Specifications and packs availability page 54.



576234

Tooling Ball Reflector (TBR) - 0.5"

Stainless steel, surface-hardened, magnetic, glass prism reflector with removable ring, protection cover for optics and certificate. Delivered in a wooden box.

Compatibility: AT500, AT930, AT960



575848

Reflectors for Fixed Installation (RFI) - 0.5", 5-pack.

Pack of 5 stainless steel, surface-hardened, magnetic glass prism reflectors in a wooden box.

Compatibility: AT500, AT930, AT960, ATS600



576962

Super CatEye Reflector (SCE)

Stainless steel, surface-hardened, magnetic reflector with ultra-wide acceptance angle of ±75° from vertical around a full 360-degree field of view. Includes reflector with optical protection cover, certificate and product storage box.

Compatibility: AT930, AT960



576966

Super Cateye Reference Target (SCRT)

Aluminium with samarium-cobalt magnet reflector with ultra-wide acceptance angle of ±75° from vertical around a full 360-degree field of view, embedded in a magnetic target base with magnetic shielding for transportation and storage. Mechanical adaptation of the SCRT can be established using the 6 mm M4 centre bore hole. Note: A valid Super CatEye Reflector 1.5" (576962) compensation is required for the corresponding Absolute Tracker system prior to the use of an SCRT (576966).

Compatibility: AT930, AT960

	Reference	Quantity	Radius	Centring of optics	Roundness (ball)	Acceptance angle	Weight
Red Ring Reflector (RRR) - 1.5"	575784 576241 576242 576243	1 pc. 2 pcs. 5 pcs. 10 pcs.	19.05 mm ±0.0025 mm	< ±0.003 mm	≤0.003 mm	±30°	170 g
Red Ring Reflector (RRR) - 7/8"	576311 576312 576313 576314	1 pc. 2 pcs. 5 pcs. 10 pcs.	11.1125 mm ± 0.0025 mm	< ±0.003 mm	≤0.003 mm	±30°	35 g
Red Ring Reflector (RRR) - 0.5"	575739 576238 576239 576240	1 pc. 2 pcs. 5 pcs. 10 pcs.	6.35 mm ± 0.0025 mm	< ±0.003 mm	≤0.003 mm	±30°	6 g
Break Resistant Reflector (BRR) - 1.5"	576244	1 pc.	19.05 mm ± 0.0025 mm	< ± 0.010 mm	< ± 0.0015 mm	±30°	195 g
Tooling Ball Reflector (TBR) - 0.5"	576234 576235 576236	1 pc. 5 pcs. 10 pcs.	6.35mm: ± 0.004mm	< ± 0.01mm	< ± 0.003mm	w/ ring ≤ ± 22° w/out ring ≤ ± 50°	7 g
Reflectors for Fixed Installation (RFI) - 0.5"	575848 576246	5 pcs. 10 pcs.	6.35 mm	not applicable	not applicable	≤ ± 50°	3 g
Super CatEye Reflector (SCE)	576962	1 pc.	19.05 mm ±0.0025 mm	< ±0.005 mm	≤ 0.003 mm	±75°	106 g
Super Cateye Reference Target (SCRT)	576966	1 pc.	-	not applicable	not applicable	±75°	84 g



575847 Surface Reflector Kit

Kit includes:

- Surface reflector with lanyard
- Pin-Point Stylus (603182)
- 3 mm Ruby-Ball Stylus (603193)
- Edge Stylus (603188/575423)
- Manual (724251)

Compatibility: AT500, AT930, AT960, ATS600



641762 Mini prism GMP104

with L-bar, for fixed installations.

Compatibility: AT930, AT960, ATS600

Reflector holders



576249 MAT22 Pass Point Target Kit

Kit includes:

- 8 x non-magnetic target base to be affixed with hot glue.
- 5x neodymium magnetic target base with magnetic shield for transportation and storage.

Delivered in case with spare cutout for CCR 1.5" reflector (not included), dimensions 250x200x70 mm, weight with targets 1.1 kg.

Compatibility: AT500, AT930, AT960, ATS600



Magnetic NORS Reflector Support for 1.5" Reflectors (RRR/BRR)

Magnetic support designed for holding larger reflectors in place.

576850 576851 1 pc. 5 pcs.

Compatibility: AT500, AT930, AT960, ATS600



575940 Roller Alignment Kit

Kit for performing roller alignments with laser tracker and TPS systems.

The kit is delivered in a dedicated hard case and comprises:

- 2 floor base plates
- 2 centering pins with magnetic adaptor for 1.5" target
- 1 roller adaptor
- 1 magnetic adaptor for 1.5" target

Compatibility: AT500, AT930, AT960, ATS600

Reflector holders



577357 Adaptor for inner diameters AID15 with adjustable magnetic base

Supports 1.5" reflectors only. For diameters 200 mm and larger. M8 thread for adaptation of CFK Extension Rod 650 mm.

Compatibility: AT500, AT930, AT960, ATS600



577339 Adaptor for inner diameters AID78 with adjustable magnetic base

Supports 7/8" reflectors only. For diameters 100 mm and larger. M8 thread for adaptation of CFK Extension Rod 650 mm.

Compatibility: AT500, AT930, AT960, ATS600



577360 **CFK Extension Rod**

CFK rod extension, 650 mm with M8 m/f thread for adapters AID15/78. Maximum number of recommended segments 3 x 650 mm.

Compatibility: AT500, AT930, AT960, ATS600



577358 Adaptor for outer diameters AOD15 with adjustable magnetic base.

Supports 1.5" reflectors only. Pin feet positions inter-changeable for smaller and larger object diameters.

Compatibility: AT500, AT930, AT960, ATS600



577362 3-Point Reflector Support (3PRS)

Special accessory with three-point support when probing with a 1.5 in reflector. The 3PRS reflector support will immediately stabilise the reflector position during a measurement process. Lower point RMS and maximum accuracy can be achieved compared to conventional 'hand-held' reflector measurements.

Compatibility: AT500, AT930, AT960, ATS600



Electronics



576875 Battery External Li-Ion 37V/8.1Ah MPB25

External chargeable li-ion battery for AT930/960 or ATS600 Absolute Tracker models. Connects to AT/ATS Controller. Built-in charger technology – MPS21 Power Supply Unit (576873) required for charging, to be ordered separately (included as standard as part of the standard laser tracker configuration). MSI26 Universal ATC Stand Fixture (576895), to be ordered separately, required to mount the battery on a stand/tripod.

Battery specifications: $37\,V\,/\,8.1\,Ah\,/\,299\,Wh$

Typical operation time: 6-8 hrs

Compatibility: AT500, AT930, AT960, ATS600



576965 Battery External Li-Ion 36V/2.5Ah MPB100

External chargeable li-ion battery for AT930/960 or ATS600 Absolute Tracker models. Connects to AT/ATS Controller. Built-in charger technology – MPS21 Power Supply Unit (576873) required for charging, to be ordered separately (included as standard as part of the standard laser tracker configuration). MSI26 Universal ATC Stand Fixture (576895), to be ordered separately, required to mount the battery on a stand/tripod.

Battery specifications: 36 V / 2.5 Ah / 90 Wh

Typical operation time: 2-3 hrs

Compatibility: AT500, AT930, AT960, ATS600



576876 Battery Cable MCA24 - 0.75 m

The battery cable supports a multi-case.

- Connects MPB25/MPB100 battery to the AT Controller/ATS Controller of the AT930/960/ATS600 Absolute Tracker
- Connects 2 MPB25/MPB100 batteries in a daisy chain charging setup
- Connects MPB25/100 battery to the AT Connect Box CB21
- Connects the AT Controller to the AT Connect Box CB21

Compatibility: AT500, AT930, AT960, ATS600



576874 **Battery Hard Case MTC29**

Hard battery case that can hold:

- 2x MPB25 Battery External Li-Ion 37V/8.1Ah (576875)
- 2x MPB100 Battery external Li-Ion 36V/2.5Ah (576965)
- 1x MPS21 Power Supply Unit (576873)
- 2x MCA24 Battery Cable 0.75 m (576876)
- 2x MSI26 Universal Stand Fixture (576895)

Empty hard case only. Accessories to be ordered separately.

Compatibility: AT500, AT930, AT960, ATS600



6009769

Battery Set MPB25

Portable laser tracker power and charging package.

- Set includes:
- 2x MPB25 Battery External Li-Ion 37V/8.1Ah (576875) Battery Specifications: 37V / 8.1Ah / 299.7Wh
- 1x MPS21 Power Supply Unit (576873)
- 2x MCA24 Battery Cable 0.75 m (576876)
- 2x MSI26 Universal Stand Fixture (576895)
- 1x MTC29 Battery Hard Case (576874)

Compatibility: AT500, AT930, AT960, ATS600



6016957

Battery Set MPB100

Portable laser tracker power and charging package. Set includes:

- 2x MPB100 Battery External Li-Ion 36V/2.5Ah (576965) Battery Specifications: 36 V / 2.5 Ah / 90 Wh
- 1x MPS21 Power Supply Unit (576873)
- 2x MCA24 Battery Cable 0.75 m (576876)
- 2x MSI26 Universal Stand Fixture (576895)
- 1x MTC29 Battery Hard Case (576874)

Compatibility: AT500, AT930, AT960, ATS600

18
7777

954519 GEB364 Battery, internal, Li-Ion, 11.1V/7000mAh

High output internal battery for the AT500 Absolute Tracker

Compatibility: AT500

575983 T-Probe Replacement Battery

Compatibility: AT960

734195 Power Supply for T-Probe Battery

Compatibility: AT960

799185 Charger Pro 3000 GKL311

Basic charger for one Li-ion battery. Suitable for GEB211, GEB212, GEB221, GEB222, GEB241, GEB242, GEB331 and GEB361. AC adaptor included.

Compatibility: AT500, TM6100A

799187 Charger Pro 5000 GKL341

Professional charger to charge up to 4x Li-Ion batteries GEB241 and GEB242, AC

adaptor included.

Compatibility: AT500, TM6100A

576873 Power Supply Unit MPS21

Power supply for AT930/960 or ATS600 laser trackers. Connects to AT Controller (576871) or ATS Controller (576981). Input 80-264 VAC to output 48 VDC. For indoor use only.

The Power Supply Unit is compatible with

- AT Controller (576871)
- MPB25 Battery external Li-Ion 37V/8.1Ah (576875)
- LASC-211 Controller unit (576909)
- AT Connect Box CB21 (577377)

The MPS21 is delivered with a country based power cord.

Compatibility: AT930, AT960, ATS600



Sensor Cable

Cable for connecting AT Controller to AT930/960 or ATS Controller to ATS600.



576885 MCS11 - 1.5 m 576886 MCS12 - 10 m 576887 MCS13 - 30 m

Compatibility: AT930, AT960, ATS600

External Temperature Sensor

Accessory for AT930/960 or ATS600 for measuring external air and/or object temperatures. It connects to the AT Controller or ATS Controller. The temperature sensor is configured with a 2, 10 or 30 m cable and has a square 8 x 8 x 42 mm tip with a borehole ø4.2 mm to fix it to the object.

Temperature range: -20 to +80°C Temperature accuracy: ± 0.3°C

576888 MCA18 - 2 m 576889 MCA19 - 10 m 576890 MCA20 - 30 m

Compatibility: AT930, AT960, ATS600



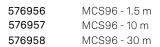
577361 Temperature Probe Holder

Temperature Probe Holder with magnetic base for object temperature probes of AT500, AT930, AT960 and ATS600 sensor types.



Elbow Sensor Cable

Connects the AT930/960 to the AT Controller or the ATS600 to the ATS Controller. Tracker-side has a 90-degree elbow plug, which enables tracker setup at a minimum height above the mounting surface (e.g. on a machine bed).



Compatibility: AT930, AT960, ATS600



Scanner Sensor Cable

Connects LAS (576908) or LAS-XL (576943) to LASC-211 Scanner Controller (576909).

576911	MCA63 - 10 m
576912	MCA62 - 20 m
576945	MCA62 - 30 m

Compatibility: AT960



Positioner Sensor Cable

Cable for connecting the Absolute Positioner AP21 (577368) with the AT Connect Box CB21 (577377).

577379	MCA110 - 10 m
577380	MCA111 - 20 m

Compatibility: AT960



576876 Battery Cable MCA24 - 0.75 m

The Battery Cable supports a multi-case.

- Connects MPB25/MPB100 battery to the AT Controller/ATS Controller of the AT930/960/ATS600 Absolute Tracker
- Connects 2 MPB25/MPB100 batteries in a daisy chain charging setup
- Connects MPB25/100 battery to the AT Connect Box CB21
- Connects the AT Controller to the AT Connect Box CB21

Compatibility: AT930, AT960, ATS600



Trigger/Probe Cable MCA114

Connects AT Controller to AT Connect Box CB21 (577377) or to T-Scan 5 (576187) and LASC-211 Scanner Controller (576909) for the LAS/LAS-XL.

855240 576903 873553

MCA114 - 0.75 m MCA47 - 2 m MCA113 - 15 m

Compatibility: AT960



577384 LAN-cable RJ-45 Cat6 MCA115 - 0.75 m

Connects AT Controller to AT Connect Box CB21 (577377).

Compatibility: AT960



575899 LAN-cable RJ-45 Cat6 MCA134 - 5 m

Connects tracker system and application computer.

Compatibility: AT500, AT930, AT960, ATS600



Cable T-Probe

Reserve or replacement cable for the T-Probe.



10 m 575972 20 m 575973 50 m 576185

576513

Compatibility: AT960



USB-to-micro-USB cable for B-Probe Plus

For firmware-upgrade via PC.



Compensations and field checks



576893 Invar Reference Bar MAC55, 1000 mm

Low thermal expansion length reference bar provides a stable length for use during laser tracker or scanner jobs. Can be directly placed on the floor/table (3-point feet). Includes supports 0.5", 7/8" and 1.5" reflectors, certificate, case with contour-cut foam.

- Bar length uncertainty: +/-0.007 mm
- Weight: 1.45 kg (3.86 kg with case)

Compatibility: AT500, AT930, AT960



576894 **6DoF Compensation Kit MAC23**

For on-site compensations of the integrated 3D and 6DoF Absolute Tracker system components. Consists of tripod interface (5/8" thread), compensation frame and light-duty magnetic holder for tooling ball reflectors 0.5". For the process a Red-Ring Reflector 0.5" (575739) and a T-Probe cable is required (20 m, 575973) – to be ordered separately.

Compatibility: AT960



576913 MAG

MAC64 Reference Sphere MAC64 - d=30 mm

Reference artefact designed for field checks and alignments of LAS laser scanner. Includes certificate.

- Diameter: 30 mm - Material: aluminum - Roundness: 0.030 mm

- Weight: 1200 g

Compatibility: AT960



576923

Reference Sphere Support MAC74

Support designed to hold the MAC64 Reference Sphere d=30 mm (576913). Has a central UNC 5/8"-11 thread compatible with MST36 (576901), AT21 (575483), AT28 (575484) tripods, as well as 2 universal 7 mm boreholes.

Compatibility: AT960



576947 Reference Sphere MAC87 - d=90 mm

Reference artefact designed for field checks and alignments of scanning systems.

Consists of:

- Aluminium reference sphere, with support
- Diameter: 90 mm
- Sphericity/roundness: 0.030 mm
- Weight: 1200 g - Certificate
- 001 11110410

The included Reference Sphere Support has a central UNC 5/8"-11 thread, which is compatible with our stands (MST36, AT21, AT28), as well as 2 universal 7 mm bore holes.

Compatibility: AT960



6010685

Reference Sphere Set MAC64 - d=30 mm

Set consists of:

- MAC64 Reference Sphere d=30 mm (576913)
- MAC77 Reference Sphere Support (576923)

Note: The Reference Sphere Support has a central UNC 5/8"-11 thread, which is compatible with our stands (MST36,AT21, AT28), as well as 2 universal 7 mm bore holes.

Compatibility: AT960



576190

Reference Sphere MAC41 - d=50 mm

Reference sphere with magnetic base designed for field checks and alignments of T-Scan 5 laser scanners.

Compatibility: AT960

575980

T-Probe Compensation Kit

For on-site compensation of Leica T-Probe. Comes with T-Probe reference frame, wedge tool, tripod screw and light duty magnetic holder for 0.5" Red Ring Reflectors. Requires additional 0.5" Red Ring Reflector (corner cube) for compensation process. The T-Probe compensation kit fits into the T-Cam compensation kit shipping container.

Compatibility: AT960



576899 T-Probe Stylus Compensation Tool MAC34

The MAC34 is used for on-site T-Probe Stylus compensations of various styli configurations. The MAC34 can be extended for Shank-Stylus with the T-Probe Stylus Shank Compensation Tool (576247).

Compatibility: AT960



576900 Magnetic Device MAC35 for MAC34

For use with MAC34 T-Probe Stylus Compensation Tool (576899). Holds to any magnetic surface. Magnetic force can be switched on and off. The MAC34 T-Probe Stylus Compensation Tool must be ordered separately.

Compatibility: AT960



576247 T-Probe Stylus Shank Compensation Tool MAC57

Accessory for compensating cylindrical probe styli. Must be mounted on the MAC34 T-Probe Stylus Compensation Tool (576899), which must be ordered separately.

Compatibility: AT960



577401 Reference Sphere MAC133 - d=25.4 mm

The Reference Sphere is designed for field checks and alignments of scanning systems.

- Diameter: 25.4 mm
- Material: Tungsten carbide with matte finish
- Certificate and base plate included
- Base plate has a central UNC 5/8"-11 thread, which is compatible with tripods (576901 MST36, 575483 AT21, 575484 AT28). In addition there are 2 universal 7 mm bore holes.

Note: The sphere is already included in the AS1 Kit

Compatibility: AT960



576512 B-Probe Plus Stylus Compensation Tool



576898 **Optical Cleaning Kit MAT33**

Does away with solvents, harsh cleaning products and messy lens tissues that can leave ugly and problematic smears that ruin measurement quality. Suitable for cleaning AT500/930/960 or ATS600 sensor optics as well as reflectors.

The kit includes:

- 1x Dust ex blower (167119)
- 2x Cleaning Tissues (771349)
- 8x Cleaning Swabs, large (758346)
- 5x Cotton Swabs, small (724954)
- 1x Cleaning Brush (822420)
- 1x Cleaning Kit Bag (821236)

Compatibility: AT500, AT930, AT960, ATS600



576401 Mirror Tool

Used to measure distances between 2 points with a laser tracker using only the interferometer. This basic set includes holders for 0.5" and 1.5" reflectors (2 units each, version 576073 and 576096). This tool can also be used to generate nominal distance values for the planned VDI/VDE standard.

Compatibility: AT500, AT930, AT960, ATS600



575483 **Aluminium Tripod AT21**

Robust and light-weight tripod with 5/8" thread. Suitable for industrial theodolites and AT403, as well as laser tracker field check equipment for ATS600 and AT9x0 models

Instrument height: 1.4 - 2.1 m, weight: 11 kg

575484 **Aluminium Tripod AT28**

Robust and light-weight tripod with 5/8" thread and adjustable centre column. Suitable for industrial theodolites and AT403, as well as laser tracker field check equipment for ATS600 and AT9x0 models.

Instrument height: 1.4 - 2.8 m, weight: 12 kg



Other accessories

Measurement cart	74
Transport case and container	7!

Measurement cart



576950

Absolute Tracker Measurement Cart MMC91

Cart is compatible with AT930/960 or ATS600. Contains a flexible shelf system for installation controllers, UPS and computers. Controller and computer compartment is temperature regulated (built-in fan). Cart can be used like a regular measuring cart or reconfigured to a shuttle cart. Drawers equipped with preconfigured foam inlays for storing AT500, AT930/960 or ATS600, scanners, reflectors and reflector supports, as well as Leica T-Probe, styli and extensions. The main cart desktop can be extended with a foldable side-table.

The cart consists of:

- Measurement Cart with shelf compartment, drawers and lockable wheels
- 2x belt with snap hook and quick-connect buckle to fix tracker and/or stands on shuttle rail
- Power strip (US or EU version)
- 5x drawer inlays
- Velcro straps for controller and computer fixation
- USB-fan with USB extension cable
- Mechanical interface for forklift manipulations
- Cable Drum

Cart compartment and drawers are lockable with a key system (2 keys included). Dimensions L=1.20 m, W=0.70 m, H=1.10 m.

Compatibility: AT500, AT930, AT960, ATS600



576942

Metrology Cart Modification Kit MMC31

Kit for modifying a standard metrology cart to fit various laser tracker and laser scanner systems.

Kit includes:

- Installation manual
- Drawer with foam inlay for scanner devices
- Scanner controller shelf with Velcro tapes for controllers and power supplies
- Foam inlay for AT930/960 and ATS600 sensors
- Set of installation material

The modification kit is compatible with the MMC31 Measurement Metrology Cart (576896) only.



576953

Dust Cover MAM94

Cover compatible with the following measurement carts: MMC91 (576950) and MMC31 (576896).



576891 AT930/AT960/ATS600 Transport Container MTC51

Standard transportation case to fit various laser tracker systems and accessories. The transport container can hold:

- Absolute Tracker AT930/AT960 (576861-576865) or ATS600 (576971)
- AT Controller (576871) or ATS Controller (576981)
- MPS21 Power Supply Unit (576873)
- MCS11 Sensor Cable 1.5 m (576885)
- AT Quick Release Mount incl. Mandrel (576338)
- MCA18 External Temperature Sensor 2 m (576888)
- Red-Ring Reflector (RRR) 1.5" (575784)
- MSI26 Universal Stand Fixture (576895)
- MAT33 Optical Cleaning Kit (576898)
- Protective Sensor Cover

Empty transport container only. Accessories to be ordered separately. Dimensions: L=62.5 cm, W=50 cm, H=36.6 cm (L=24.60", W=19.70", H=14.40")

Compatibility: AT930, AT960, ATS600



577446 MTC135 AT500 Transport Container

Robust carry case for the Absolute Tracker AT500 and accessories. The Transport Container can hold:

- AT500 Absolute Tracker (577440)
- MPS134 Power Supply Unit (577407)
- AT Quick Release Mount incl. Mandrel (576338)
- MCA18, External Temperature Sensor 2 m (576888)
- Red Ring Reflector (RRR) 1.5" (575784)
- MSI26 Universal Stand Fixture (576895)
- MAT33 Optical Cleaning Kit (576898)
- Protective sensor cover

Empty transport container only. Accessories to be ordered separately.

Compatibility: AT500



576922 LAS Trolley Case MTC73

The trolley case can hold:

- LAS laser scanner (576908)
- LASC-211 Scanner Controller (576909)
- MCA62 Scanner Sensor Cable 10 m (576911)
- MPS21 Power Supply Unit (576873)
- LAN-cable RJ-45 5 m (575899)
- MCA47 T-Scan Trigger/Probe Cable 2 m (576903)
- MAC64 Reference Sphere d=30 mm (576913)
- MAC74 Reference Sphere Support (576923)
- MAP65 Horizontal Scanner Holder (576914)
- MAV67 Scanner Controller Feet Set (576915)
- T-Probe III (576186)
- T-Probe Styli Kit (576231)
- MPB25 Battery external Li-Ion 37V/8.1Ah (576875)

Empty trolley case only. Accessories to be ordered separately. Dimensions: L=62.5 cm, W=50 cm, H=36.6 cm (L=24.60", W=19.70", H=14.40")

Compatibility: AT960



576910 LAS Transport Case MTC61

The transport case can hold:

- LAS laser scanner (576908)
- LASC-211 Scanner Controller (576909)
- MCA62 Scanner Sensor Cable 10 m (576911)
- Power Supply Unit (576873)
- LAN-cable RJ-45 5 m (575899)
- MCA47 T-Scan Trigger/Probe Cable 2 m (576903)
- MAC64 Reference Sphere d=30 mm (576913)
- MAP65 Horizontal Scanner Holder (576914)
- MAV67 Scanner Controller Feet Set (576915)

Empty transport container only. Accessories to be ordered separately. Dimensions: L=49.6 cm, W=33.0 cm, H=25.6 cm (L=19.53", W=12.99", H=10.08")

Compatibility: AT960



576949

LAS/LAS-XL Trolley Case MTC90

The trolley case can hold:

- LAS-XL laser scanner (576943)
- LAS-20-8 laser scanner (576908)
- LASC-211 Scanner Controller (576909)
- MCA63 Scanner Sensor Cable 20 m (576912)
- MPS21 Power Supply Unit (576873)
- LAN-cable RJ-45 5 m (575899)
- MCA47 T-Scan Trigger/Probe Cable 2 m (576903)
- 2x MAP65 Horizontal Holder (576914)
- MAC64 Reference Sphere Set d=30 mm (6010685)
- MAC87 Reference Sphere d=90 mm (576947)
- MPB25 Battery External Li-Ion 37V/8.1A (576875)
- Leica T-Probe III (576186)
- Reflector case

Empty trolley case only. Accessories to be ordered separately. Dimensions: L=62.5 cm, W=50 cm, H=36.6 cm (L=24.60"", W=19.70"", H=14.40"")

Compatibility: AT960



576944

LAS-XL Trolley Case MTC85

The trolley case can hold:

- LAS-XL laser scanner (576943)
- LASC-211 Scanner Controller (576909)
- MCA63 Scanner Sensor Cable 20 m (576912)
- MPS21 Power Supply Unit (576873)
- LAN-cable RJ-45 5 m (575899)
- MCA47 T-Scan Trigger/Probe Cable 2 m (576903)
- MAC87 Reference Sphere d=90 mm (576947)
- MAP65 Horizontal Scanner Holder (576914)

Empty trolley case only. Accessories to be ordered separately.

Dimensions: L=49.6 cm, W=33.0 cm, H=25.6 cm (L=19.53"", W= 12.99"", H=10.08"")

Compatibility: AT960



577387 Absolute Scanner Trolley Case MTC118

The trolley case can hold:

- Absolute Scanner AS1 (577367), incl. Certificate
- Absolute Positioner AP21 (577369)
- MAP102 Grip (577370)
- AT Connect Box CB21 (577377)
- MCA110 Positioner Sensor Cable 10 m (577379)
- MCA24 Battery Cable 0.75 m (576876)
- MCA114 Trigger/Probe Cable 0.75 m (855240)
- MCA115 LAN-cable RJ-45 Cat6 0.75 m (577384)
- MAC133 Reference Sphere d=25.4 mm (577401)
- MAP116 Positioner Horizontal Holder (577385)
- MSI26 Universal ATC Stand Fixture (576895)
- MAP117 Positioner Clip Support (577386)

Empty trolley case only. Accessories to be ordered separately. Dimensions: L=53.8 cm, W=40.6 cm, H=26.9 cm (L=21.20", W= 16.00", H=10.60")

Compatibility: AT960, Absolute Scanner AS1

Further accessories



575965 Wireless IR Control

4 custom programmable buttons, up to 20 m/65ft range, USB interface, compatible with Windows XP or higher (32bit/64bit).

Compatibility: AT500, AT930, AT960, ATS600



576379 AT Remote Control 400

Wireless infrared control unit compatible with Absolute Tracker AT500. Content: Remote control unit 2x AAA-batteries.

Compatibility: AT500



874298 Surface Sample Tool

Demonstrating and comparing scanning sensors on difficult materials is now possible. Use the Surface Sample Tool to demonstrate the capability of our scanning devices. The Surface Sample Tool consist of 12 different surface sample materials: metal coated Aramide fibre with clear coat finish, black felt textile, white car paint 2K/clear coat, black car paint 2K/clear coat, red car paint 2K/clear coat, yellow car paint 2K/clear coat, carbon fibre flat finish (grinded), green car paint 2K/clear coat, carbon fibre semi-gloss finish (prepreg), blue car paint 2K/clear coat, carbon fibre gloss finish (clear coated) and chrome plated.

Dimensions: 290 x 150 x 13 mm, weight: 620 g



576981 Leica ATS Controller

Controller for the ATS600 scanning laser tracker.

MPS21 Power Supply Unit (576873) and MSI26 Universal ATC Stand Fixture (576895) must be ordered separately.

Compatibility: ATS600



576871 **AT Controller**

The AT Controller is compatible with Leica Absolute Tracker AT930/AT960 series. The 576873 MPS21 Power Supply Unit and 576895 MSI26, Universal ATC Stand Fixture has to be ordered separately.



Industrial theodolites

Industrial theodolites

82

Accessories for industrial theodolites

83

Industrial theodolites



576372 TM6100A Motorized Industrial Theodolite

With pan focal telescope, build-in autocollimation eyepiece and GUS29 internal target. Including user manual, upright container and Calibration Certificate "Gold".



576528 Optional Second Keyboard GTS39

Additional keyboard with touchscreen and colour display.
Fits to telescope position 2 (factory fitted).
Must be configured with a new instrument and cannot be ordered separately.



308838 Eyepiece FOK53

Viewing eyepiece with 44x magnification at 10 m. Optically adjusted and fitted in factory (only to be ordered with new instrument).



799658 Screen protector SPF03

Reserve or replacement touchscreen protection foil for protection against scratches and dust.



376236 Steep Sight Eyepiece GOK6

Viewing eyepiece with joint allowing variable sighting angle. Includes counterweight compatible with the TDRA6000 (the M5100A/TM6100A requires a different counterweight (712504) that must be ordered separately).



712504 Counterweight (GOK6)

Required counterweight for using GOK6 Steep Sight Eyepiece.



575725 Plug-in Lamp AL51



392368 **Autocollimation Mirror GAS1**

Mirror for autocollimation with diameter of 50 millimetres, delivered in a case.



723231 Counterweight (DL2/3)

Required counterweight for using DL2/3 diode laser with TM5100A/TM6100A.



576352 Tribrach PRO without Optical Plummet GDF321-I - light grey

Compatibility: TM6100A



576353 Tribrach PRO with Optical Plummet GDF322-I - light grey

Compatibility: TM6100A



417677 Measuring slide (single direction) GMT5

With maximum working range 40 mm; least count 0.01 mm.

Compatibility: TM6100A



417678 Adaptor set GAD12

For mounting GMT5 translation stage onto any Leica tribrach; includes tribrach to mount instrument; typical adapter set for theodolites and total stations.

Compatibility: TM6100A



417679 Adaptor set GAD13

For mounting GMT5 translation stage onto 5/8"thread; includes adaptor plate with 5/8" thread to mount instruments; typical adaptor set for levels.

Compatibility: TM6100A



575483 **Aluminium Tripod AT21**

Robust and light-weight tripod with 5/8" thread. Suitable for industrial theodolites and AT403, as well as laser tracker field check equipment for ATS600 and AT9x0

Instrument height: 1.4 - 2.1 m, weight: 11 kg

575484 **Aluminium Tripod AT28**

Robust and light-weight tripod with 5/8" thread and adjustable centre column. Suitable for industrial theodolites and AT403, as well as laser tracker field check equipment for ATS600 and AT9x0 models.

Instrument height: 1.4 - 2.8 m, weight: 12 kg

575498 Tripod bracket

in order to attach accessories (battery, DL2 intensity regulator, Radio Modem) to AT21/28 tripods.

296632 Telescopic Tripod with Accessories GST20

Robust, well-established tripod for general use. Suitable for levels, lasers, Total Stations and GPS. Extendible 180 cm (5.9ft), weight 6.4 kg (14.1lb)

Compatibility: TM6100A, AT403

332200 Tripod Base GST4

For setting up GST tripods on smooth surfaces.

Compatibility: TM6100A, AT403

577261 Instrument Adapter 235-5

For instruments with 5/8"-11 mount requirements: converts a 3½"-8 standard external instrument thread on any stand or adaptor into a 5/8"-11 external thread to accommodate most theodolites or other instruments.

Effective height: 27.7 mm (vertical distance between the lower interface surface and the top, on which the instrument would rest). Internal thread: 31/2"-8

Material: stainless steel | Weight: approx. 1.36 kg

Compatibility: TM6100A, AT403





793975 Lithium-Ion Battery GEB242

Rechargable 14.8V/5.8Ah battery.

Compatibility: TM6100A



774437 Charger GEV242 for GEB371 external battery

for indoor use only, input 100V-240VAC 50-60HZ, output 24VDC, cable with 5-pin Lemo to connect to battery.



799185 **Charger Pro 3000 GKL311**

Basic charger for one Li-ion battery. Suitable for GEB211, GEB212, GEB221, GEB222, GEB241, GEB242, GEB331 and GEB361. AC adaptor included.

Compatibility: TM6100A, AT500



799187 Charger Pro 5000 GKL341

Professional charger to charge up to 4x Li-Ion batteries GEB241 and GEB242, AC adaptor included.

Compatibility: TM6100A, AT500



905305 External Battery Li-Ion GEB373

13V, 289Wh. Quick Guide and User Manual, mutlilingual included

1	575427	T-LINK Interface Power supply unit for TPS, for indoor use only. Input 94-265VAC to output 12VDC. Connects up to 4 TPS6000 instruments or up to 8 TPS5000 instruments.
	576521	Power cable GEV286-I 20 m Connects TPS6000 instrument with power supply T-Link/GEV270 or external battery GEB371.
B	800497	Cable spool for 20 m/40 m cables (without cable)
	576388	USB adapter RS232 serial
	574834	Cable to connect DL2/3 and intensity regulator.
	527497	Data cable GEV86 - 20 m Connects DL2/3 intensity regulator or TPS5000 instrument to external power supply T-LINK/GEV270 or external battery GEB371.
	576387	Power Cable GEV64-I - 1.2 m connects TM6100A with DL2/3 intensity regulator.

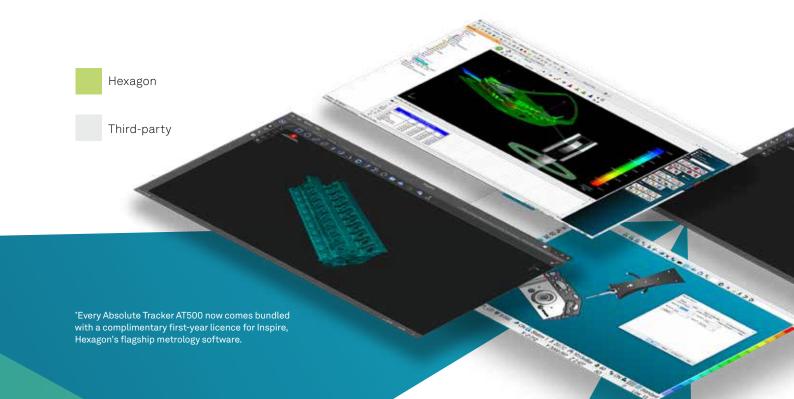
-	6013373	TPS6000 Interface Set Consists of: GDF321-I Industrial Tribrach w/o opt. Plummet GKL341 Professional Charger 5000, MCF256 Compact Flash Card, GEV269 Data Transfer Cable Lemo1 / USB
	806093	Serial data transfer cable GEV267 - 2.0 m converter cable USB to serial (Lemo to USB connector), connects TPS02/06+/09+/11/12/15/DNA/TPS5000 to PC. PC driver included on CD.
	807696	Power supply GEV270 for TPS5000/TPS6000 for indoor use only, Input 100 - 240V AC to output 13.8V DC, with connection for power cables. Requires GEV219, GEV220 or GEV286-I power cable to connect TPS6000 instrument.
	758469	Power cable GEV219 - 1.8 m Connects TPS6000 instrument with power supply GEV270 or external battery GEB371.
	759257	Y-Cable GEV220 - 2.0 m Connect TPS6000 instrument to PC (9-pin RS232 serial) and power supply GEV270 or external battery GEB371.
	733282	Data transfer cable GEV162 - 2.8 m Connects TPS6000 instrument to PC for data transfer, firmware upload etc., Lemo 1 to 9-pin RS232 serial connector.
	806095	Serial data transfer cable GEV269 - 2.0 m Connects TPS6000 instrument to PC for data transfer, firmware upload etc., converter cable USB to serial (Lemo 1 to USB A connector), PC driver included on CD.
	758513	Adapter cable TPS6000 (Lemo 0 - Lemo 1)

	707525	Lemo Canon converter GK1 30°, for PC
6		Compact Flash card
	733257	MCF256 - 256 MB
	745995	MCF1000 - 1 GB
	767895	USB card reader MCR7
		for SD- and CF-cards
	733258	Compact Flash PC Card adapter MCFAD1
	409678	Data cable GEV52 1.8 m Connects DL2/3 intensity regulator to external power supply T-LINK/GEV270 or external battery GEB371.
	571549	Targets on self-adhesive-foils Black/white, ø 23 mm with concentric circles, 48 pieces on one sheet.
	574681	Target for orientation measurements, magnetic.
	800742	Scale bar - 0.9 m Carbon fibre, incl. Producer Certificate, in carrying case.

Driving the tools of high-end inspection

Hexagon is the largest software developer in the metrology industry and offers a wide range of individually customisable software packages. Hardware solutions from Hexagon support this with a foundation of cross-platform compatibility, designed for perfect functionality with both the many advanced platforms developed in-house and the best third-party programs on the market.

SpatialAnalyzer	Inspire*	PC-DMIS	VISI Reverse	TRAC-CHECK
PolyWorks®	Metrolog X4	Verisurf		
DM Works	Silma / X4-iRobot	HxGN Robotic Automation	RoboDyn	



Application Software

Hexagon software

Third-party software

Inspire

User-friendly measurement software for portable probing and scanning

Inspire is the next generation inspection software for all portable probing and scanning devices. Inspire is a new software package that makes measurement simple and the complex possible. With one simple interface, Inspire works with laser tracker for probing and scanning applications. Intuitive and easy to use, Inspire software is a comprehensive solution that makes measurement simple, saves time, and ultimately improves productivity.

ProEngineer, Inventor and Parametric CAD import. Training classes available at additional cost and updates

Inspire capabilities

- Measure
- Align
- Assemble/Build
- Analyse
- Report
- Scan and Probe
- Mesh
- Instrument networking

for 1 year. Inspire provided with licence code.

- Advanced Scripting
- CAD Import





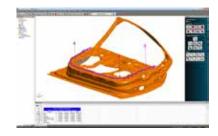
SpatialAnalyzer®

Powerful and traceable measurement and analysis software

Spatial Analyzer® (SA) is a powerful, traceable and easy to use metrology and analysis software package, tailored for Hexagon's Manufacturing Intelligence portable CMM family.

SA offers a vast number of benefits, including:

- Intuitive, state of the art graphical environment.
- Interfaces to all Hexagon Manufacturing Intelligence portable CMMs.
- All common CAD exchange and native formats.
- Advanced analysis and processing and unique alignment techniques.
- Easy multiple-instrument station bundling.
- True GD&T and feature checks.
- Numerous reporting options.
- Measurement uncertainty calculation.
- Unified Spatial Metrology Network to achieve the ideal instrument network.
- Integrated Modern Scripting Language to automate complete workflows.
- Multiple language support.
- Free SA Viewer to share SA job files easily.

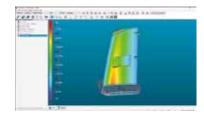


PC-DMIS Portable

Supporting systems from CMMs to portable measuring arms and laser trackers, PC-DMIS is a measurement software solution for metrology professionals and shop-floor operators

Portable measurement devices have changed the way operations are monitored, making it possible to take measurements and analyse the results directly where parts are made and assembled. PC-DMIS Portable provides the tools needed to more effectively monitor operations and identify minor issues before they turn into costly problems.

Pc



PC-DMIS CAD++ Probing

Includes LMS license + all Portable interface (ROY-I-PORTABLE) + XACT GD&T + IGES / DXF / DWG / STEP203 / STEP 214 / VDAFS / XYZIJK / DES and DMISI/O translators and updates for 1 year

PC-DMIS CAD++ Scanning

Includes LMS license + All Portable interfaces (ROY-I-PORTABLE) + Hexagon Scanning Probe Interface + Scanning Auto Features + Full COP support + XACT GD&T + IGES / DXF / DWG / STEP203 / STEP 214 / VDAFS / XYZIJK / DES and DMISI/O translators and updates for 1 year.

PC-DMIS CAD++ Scanning/Mesh

Includes LMS license + all Portable interfaces (ROY-I-PORTABLE) + Hexagon Scanning Probe Interface + Scanning Auto Features + Full COP support + XACT GD&T, IGES / DXF / DWG / STEP203 / STEP 214 / VDAFS / XYZIJK / DES and DMISI/O translators + STL Mesh Creation and Inspection and updates for 1 year.

VISI Reverse

The shortcut from 3D scan to manufacturing

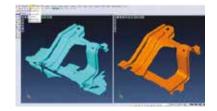
VISI Reverse, an intuitive module that can be added to the mold and stamping industry leader VISI application from Hexagon, combines hybrid modelling CAD functionality with 3D scan data processing abilities so that easily customers can create fully compatible editable solid models starting from digitized/scanned data.

Features at a glance:

- Direct import of point cloud from scanning device
- Automatic mesh creation / cleaning / smoothing
- Dynamic wireframe grid construction
- Automatic surface creation

Powerful and Flexible. VISI Reverse is born to import unlimited scanned data directly from Hexagon portable devices such as the Absolute Arm or the Leica Absolute tracker, or from a generic CSV file format and to convert these data point clouds into a usable mesh, a fully editable geometrical model or a hybrid model.





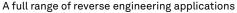
REcreate

The reverse engineering software that perfectly combines powerful capability wit an optimal user experience.

REcreate takes the complexity out of reverse engineering to create a smarter, faster and more flexible design and production environment for modelling new products and for repairing or replacing parts.

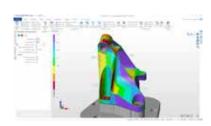
Making sophisticated design simple

Highly flexible, REcreate stands apart from traditional reverse engineering software by incorporating a CAD system that can create 2D drawings as well as CAD models. REcreate fits into any existing production workflow and is versatile enough to be used as a standalone product, working with machines that don't use CAM data, or as part of an end-to-end CAD to CAM solution. Other key functionalities include direct modelling, which makes it easy for users to form the shape the require.



The ease-of-use and interoperability of REcreate make it simple for users to capture data by connecting directly to scanning devices or importing mesh, solid, surface or point cloud data. They can model designs in a single environment using a full array of modelling data and manufacture using CAD/CAM – as well as validate quality. And they can start at whichever point in the reverse engineering process that best suits their needs.





TRAC-CHECK

For check of large machine tools according to traceable standards

For large machine tools (> 5 m) it is also possible to use a laser tracker from Hexagon to check machine accuracy according to standards by the software ETALON TRAC-CHECK.

ETALON TRAC-CHECK software solution

Innovative measuring software to ensure machine tools meet international standards for precision

The ETALON system uses multilateration, a spatial measurement technique deployed by satellite navigation systems, to increase measurement speeds and ensure the highest levels of accuracy when calibrating, compensating and verifying machine tools. The speed and precision of multilateration means manufacturers can reduce measurement times by up to 80% compared to conventional laser interferometers, thereby securing results in one to two hours instead of one to two days.

ETALON TRAC-CAL | TRAC-CHECK uses a single self-tracking laser interferometer either from ETALON or the Leica Absolute Tracker AT930/960. This makes measurements more accurate and traceable, while reducing the maintenance and recalibration costs.



HxGN Robotic Automation

Intuitive, flexible and scalable software to power robotic inspection cells

HxGN Robotic Automation is an intuitive, flexible and scalable robotic control software designed to simplify programming for automated measurement and inspection applications.

The HxGN Robotic Automation software provides the toolset to efficiently plan, program and control robotic cells based all major robot suppliers, as well as integrating with the wider manufacturing software ecosystem, simplifying the data acquisition process for smarter manufacturing processes. Created specifically to orchestrate the sensors, software and robotic equipment of an inspection cell from a single, intuitive interface, HxGN Robotic Automation makes automated measurement more accessible, more efficient and more reliable.



RoboDyn

For check of robot according to traceable standards

Innovative software solution delivering full calibration and performance testing functionality for industrial robotic systems.

The RoboDyn robot calibration and inspection system delivers complete robotic control, making it simple to get the most out of the precision, flexibility and intelligence automated systems have to offer.

With the ability to calculate robot base alignment and tool centre point offsets as well as directly correct and compensate for robot parameters, the RoboDyn software is the perfect tool for improving absolute positioning and performance of robotics. Designed to meet the demands of the ISO 9283 standard, RoboDyn guarantees accuracy and reliability throughout automated operations.

Simple and easy to use, RoboDyn allows for on-the-spot modification of robot models, followed by fast recalibration. Coming alongside the full capability for offline simulation, RoboDyn has the potential to transform process productivity across manufacturing, installation, testing and logistics areas.

For static and dynamic data acquisition, RoboDyn requires use in conjunction with a quality Leica Absolute Tracker featuring precision, speed, large measurement range, portability and the capacity for 6DoF measurement.



Third-party software

PolyWorks®

Polyworks is a software solution for high-end point cloud inspection and reverse engineering applications.



Whether you are casting, milling, molding or stamping, you can rely on PolyWorks to provide a complete solution for your process. The PolyWorks software suite is available as a complete package or - with regard to the two main applications - as a point cloud inspection or reverse engineering package.

PolyWorks®, developed by InnovMetric Software Inc, Canada, is a solution for high-end point cloud inspection and reverse engineering applications.

Metrolog X4



The global 3D inspection software is a standard for measuring applications in automotive, aerospace and the general precision industry.

Metrolog X4 interfaces to the Absolute Trackers, the "Walk-Around" Leica T-Probe, the Leica T-Scan and the Absolute Scanner AS1. In addition, more than 50 interfaces for CMMs and PCMMs are available. The graphical visualisation provides direct interfaces for virtual any neutral and native CAD format. A powerful feature-based measurement tool, a complete GD&T engine, customizable reporting and a simple and fast programming language, support and simplify your sophisticated assembly and inspection processes. Metrolog X4 is available in 19 languages.

Metrolog X4, developed by Metrologic Group of Europe, the global 3D inspection software is a standard for measuring applications in automotive, aerospace and the general precision industry.

Verisurf



Verisurf is an all-in-one metrology software solution for alignment, inspection, tool building, assembly, scanning, analysis, reporting, automation, and reverse engineering applications.

Verisurf Software, Inc., is a measurement solutions company committed to delivering powerful, easy-to-learn metrology software. Verisurf supports all 3D measurement workflows, including alignments, inspection, tool building, assembly, scanning, analysis, reporting, automation, and reverse engineering. Verisurf's robust foundation supports all CAD file types and interoperability with all contact and non-contact measurement devices.

DM Works



DMWorks is a software package for automated applications comprised of different modules. It allows the creation of a measurement cell, the running of simulations, the generation of robot paths and even control of a measurement cell.

DMWorks-LSA (Leica Scan Automation):

- General purpose virtual measurement simulation and robot offline programming software for multiple LSA systems
- Accurately arrange and create virtual measurement workcell by aligning all devices to minimise position errors between virtual and physical systems
- Generate optimised robot scanning path for each measurement feature with robot motion simulation.

LSA-Controller

- Integrated measurement control and operation software for one specific LSA system
- Collect and display real-time scanned point cloud data that can be transferred for analysis
- Provides a simple procedure for system recovery when system error occurs

LSA - Simulator

- OLP simulator for one specific LSA system
- Virtual measurement simulation
- Virtual measurement workcell alignment
- Offline robot programming

Silma / X4-iRobot



Silma is the advanced simulation software package from Metrologic which enables the creation of part program offlines, to check for risk of collision and path optimization. The Metrolog X4 i-Robot is the software package which runs the robot and measurement program in a single package, providing reports in a single software platform.



HxGN SFx | Asset Management The smart choice for smart manufacturing



Real-time performance data in a centralised user-friendly dashboard, now as standard

HxGN SFx | Asset Management delivers a simple, accurate and reliable way to monitor and analyse how key assets are performing via a centralised, user-friendly dashboard, whether on a single site or distributed across multiple locations around the world.

This future-proof solution provides manufacturers with easy and intuitive access to important information in real-time to allow for better informed decision making. Smart measurement and smart monitoring are the future of smart manufacturing.

- Monitor and manage device status, usage and performance.
- Securely access information from anywhere in real time.
- Identify production bottlenecks and other sources of inefficiency.
- · Receive customisable critical event notifications.
- Easily locate individual or fleets of portable assets with GPS tracking.
- Track assets across a single site or at multiple worldwide locations.



The SFx Asset Management solution is fully compatible with AT960, AT930, ATS600 and AT500 Absolute Tracker models. Every model in the Absolute Tracker range now includes a year's subscription to HxGN SFx | Asset Management PRO and a free GPS location add-on as standard.







World-class products to rely on

Drawing on decades of research and development experience, laser tracker technology from Hexagon's Manufacturing Intelligence division is built on a long history of outperforming technological innovation. Deriving quality from experience to drive productivity is what keeps Hexagon in front and able to deliver first-class solutions for industries around the world.

That's why every major laser tracker product in this brochure comes with a 24-month factory warranty as standard, as well as a guaranteed 10 years of serviceability through official Hexagon service channels.

World-class support delivered locally

The international presence of Hexagon guarantees comprehensive aftersales support and services across the globe. With the largest dedicated service team of any metrology equipment manufacturer and an emphasis on locally delivered solutions, Hexagon is unmatched from service, repair, certification and calibration through operator training and software maintenance and upgrades.



World-class service made simple

Hexagon offers a wide range of support services extending well beyond the point of purchase. Delivered by experienced and skilled engineers at ISO-certified laboratories, local Hexagon Precision Centres or even on-site to minimise downtime, our after-sales portfolio is the most complete on the market.

- Maintenance and warranty plans that ensure equipment availability
- Trouble-free usage and minimal downtime
- Preferred hotline access at no additional cost
- Access to professional advice whenever needed

Customer Care Packages

Owners of the Hexagon laser tracker products featured in this brochure also have the opportunity to invest in a Customer Care

Package designed to ensure equipment remains in top condition and can be relied on for accurate measurement results throughout
a lifetime of use.

Customer Care Packages include a selection of the following benefits, depending on the tier chosen.

	Platinum	Gold	Silver	Bronze
Planned annual service	✓	✓	✓	✓
Customer hardware support	✓	✓	✓	✓
Annual maintenance and recertification	✓	✓	✓	
Remote connected assistance	✓	✓		
Repair parts and labour	✓			
Customised local benefits	✓	✓	✓	✓

For complete details of the benefits of each level of Customer Care Package, please contact a local Hexagon representative.



Hexagon is a global leader in digital reality solutions, combining sensor, software and autonomous technologies. We are putting data to work to boost efficiency, productivity, quality and safety across industrial, manufacturing, infrastructure, public sector, and mobility applications.

Our technologies are shaping production and people-related ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Hexagon's Manufacturing Intelligence division provides solutions that use data from design and engineering, production and metrology to make manufacturing smarter. For more information, visit hexagonmi.com.

Learn more about Hexagon (Nasdaq Stockholm: HEXA B) at **hexagon.com** and follow us **@HexagonAB**.