

# Leica Geosystems Original Accessories Material matters



- when it has to be **right**

**Leica**  
Geosystems



## To be precise: Every detail counts

As far as the eye could see, there was nothing. Then came the survey professionals. Today an entire city district stands where earlier fields and meadows were. Measurement experts work as pioneers for the realization of the visions and plans of others. The results of their work are essential. Their meaning lies in the truth upon which the others trust. It is with this consciousness that Leica Geosystems designs its instruments. And it is from this standpoint that Leica builds accessories that have been meticulously aligned to the instruments. Because every detail counts, when visions are to become reality.



Cato Richard Paulsen is Service Manager at Skanska Norway, with 4,500 employees one of the leading construction firms of the country. For the firm's 80 surveyors, accuracy counts: "We conduct comprehensive tests with all new instruments and accessories.

In doing so we were once able to discover a prism replica, the distribution in Norway was stopped a short time later. We must be able to absolutely count on the quality of the equipment and that is why we use the original accessories from Leica Geosystems."



The energy supply company Illwerke AG exports electricity to other countries, Germany being among them. The new construction and the maintenance of power stations, dams and tunnels require precise measurements and reliable monitoring. Rupert

Zischinsky is Manager of Survey Technology. He emphasizes: "The quality of the accessories is very important for measurement accuracy. We do also have experience with other non-Leica Geosystems accessories, for example prisms, with which the target heights did not match and the addition constants differed."





# Valuable Accessories

## For valuable results

The term “quality” is quickly and easily said, as long as one is not talking about concrete results. But it is only results that count: for the professional user, the measurement result. For Leica Geosystems, the satisfied customer. And that is over years and decades.

### **The quality of the original**

For about ninety years, Leica Geosystems has given the term “quality” concrete substance. It covers not only the mechanical and optical quality of the accessories, but also, in the last decade increasingly important, the electronic quality with the criteria data integrity and data security. This comprehensive quality is the result of a unique process with clear guidelines and meticulous controls: starting with the qualifications of the supplier, to the testing, processing and refining of the materials, from the assembly of the components up to the tuning of the accessories to the instruments, and the accompanying tests for compliance to all specifications.

### **The precision of the original**

Precision can only be defined as the accuracy of the instrument and accessory system as a whole. Speaking with the experience of the professional: “The best instrument is worth less when the accessory is not perfectly aligned to that instrument.” The value of the original can be recognized when accessories with descriptions such as “Leica-like” are offered. This honours us, but does not help our customers further,

because these products neither match the quality the customer expects from original Leica Geosystems accessories, nor are they as perfectly aligned to the Leica Geosystems instruments.

### **The reliability of the original**

Just as the expert sometimes has to perform tasks in minus temperatures, so must his equipment always function smoothly, even in extreme conditions. And just as the technician works for many years, so should his equipment give him many long years of service, like the original accessories from Leica Geosystems.

### **The guarantee of the original**

1. The exchange guarantee during the warranty period of one year means that you promptly receive a new, identical product or a repaired product, should your accessory exhibit manufacturing defects.
2. The replacement parts guarantee means that during the product's lifetime, and according to the accessory series (see pages 4/5), even after the discontinuation of a product, Leica Geosystems will have replacement parts available for you.

# Transparent Choice

## For your individual requirements



All our customers are experts in their fields. All have the need for professional accessories of outstanding quality. Many of them quite simply want "the best", and therefore the accessories of the "Professional 5000 Series". Based on their daily work and requirements, some make the products of the "Professional 3000 or 1000 Series" their choice. Whatever the case may be, it is a decision for quality.

# Three Original Accessory Series

## For your benefit



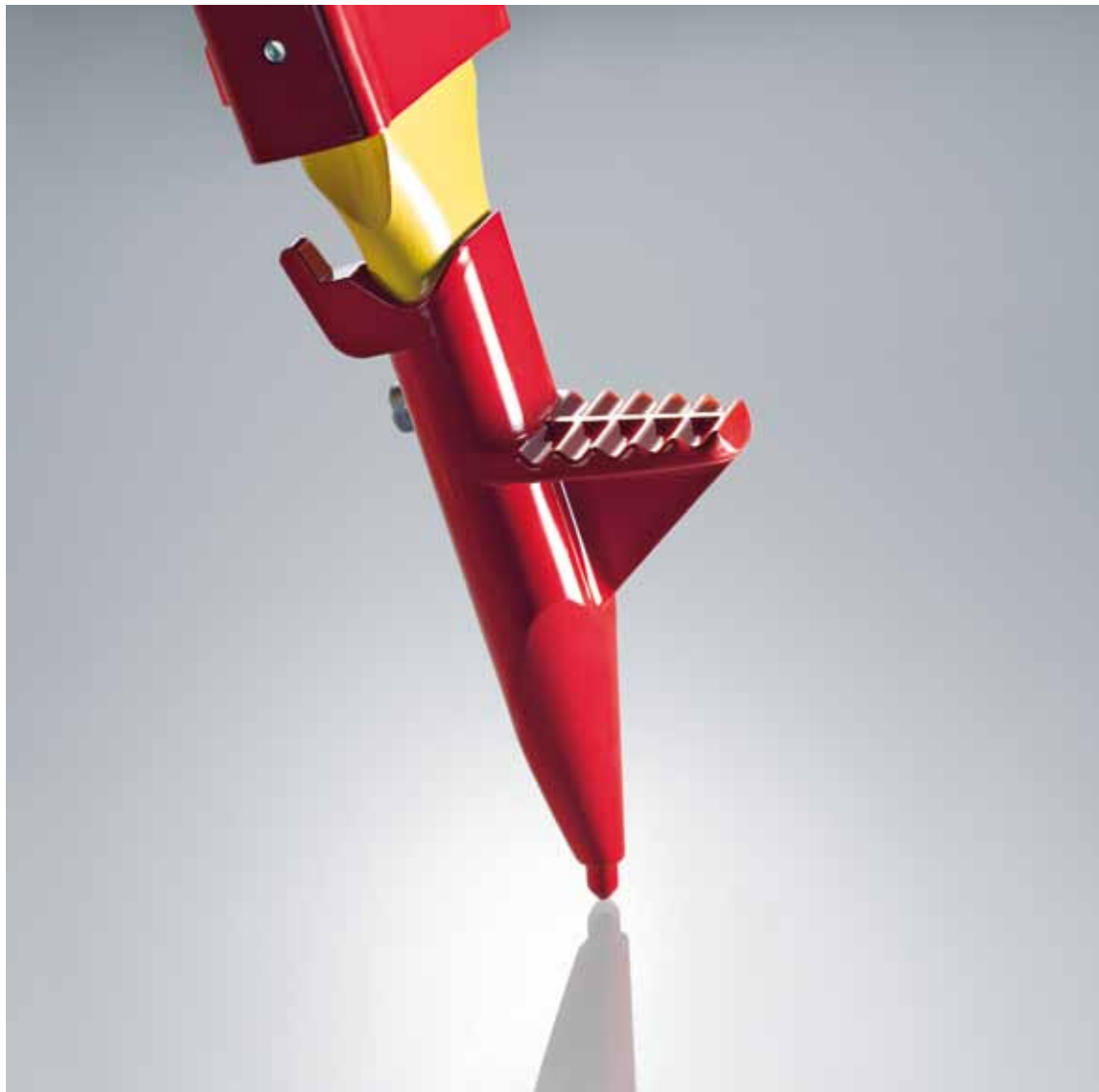
Quality always remains quality. But not every user needs extremely low measurement tolerances or works under extraordinary climatic conditions. That is why Leica Geosystems offers its original accessories in three series for differing requirements. There is a lower limit, through which quality is defined. There is, however, no upper limit, because our customers' demand for maximum performance rises continually.

	PROFESSIONAL 5000	PROFESSIONAL 3000	PROFESSIONAL 1000
Price/ Performance	<b>The Professional 5000 Series meets the highest demands for precision, reliability, longevity and service.</b>	<b>The Professional 3000 Series meets high standards in exactness, function, consistency and service.</b>	<b>The Professional 1000 Series reliably fulfils all requirements of the most common surveying tasks.</b>
Accuracy	You achieve the best possible measurement accuracy with these products. We recommend them for highest accuracy class instruments. *****	The Professional 3000 Series is conceived for all applications where a positioning accuracy of 3 mm and more is sufficient. ***	For applications with required position accuracy in 10 mm range. *
Environmental Specifications	For use even in extreme conditions of -20 to 50°C. *****	For use even in extreme conditions of -20 to 50°C. ***	For use only in normal to demanding conditions of -10 to 40°C. *
Spare Parts	All working parts remain available years after product is discontinued. *****	The most important working parts remain available years after product is discontinued. ***	Spare parts available only for selected products. *
Lifetime	The chosen materials guarantee a maximum lifetime, even under the most extreme conditions. *****	The materials used provide a long lifetime, even under difficult conditions. ***	The material selection ensures a long lifetime under normal conditions. *



# Original Tripods

## For stability



The most important criterion for a good tripod is its stability, quite explicitly, the torsional rigidity. With that, a very valuable, but not the only, argument for the original tripod from Leica Geosystems has been named. Other substantial benefits are the height stability under load and the minimal horizontal drift. Also not to be underestimated are advantages such as long life, optimal vibration dampening, water resistance, outstanding behaviour in solar radiation and their weight in relation to load-bearing capacity.

# Transparent Choice

## The best tripod for your requirements

Leica Geosystems offers you a large selection of high-value tripods for all survey instruments and applications. The right tripod choice is decisive if the indicated accuracy of an instrument is to be reached. The classification "heavy duty" and "light duty" is widely based on ISO Norm 12858-2. They differ through the stability requirements and instrument weight.

### PROFESSIONAL 5000



**TRIPOD  
HEAVY DUTY**

- The Professional 5000 Series consists solely of heavy duty wooden tripods providing highest stability.
- Best height stability, maximum torsional rigidity and minimal horizontal drift over long time periods.
- Suitable for instruments up to 15 kg.
- Recommended for the highest angle accuracy of 3" and less.
- Due to vibration dampening characteristics of the carefully selected beech wood, this series is highly recommended for use with motorised TPS instruments.
- With its height stability, this series perfectly complements the Leica Digital Level DNA03.

### PROFESSIONAL 3000



**TRIPOD  
LIGHT DUTY**

- The Professional 3000 Series consists of high value, light duty tripods.
- Suitable for instruments with weights of under 5 kg.
- Optimised for maximum lifetime in most difficult of operating conditions.
- Available in either wood or aluminium, according to application.
- GST05 wooden tripod suitable for non-motorised TPS instruments with angle accuracy from 5 to 7". Ideal tripod for mobile GNSS Reference Stations as well as static observations.
- GST05L aluminium tripod. Suitable for short-term prism stations on control points or as a light tripod for GNSS measurement campaigns.

### PROFESSIONAL 1000



**TRIPOD  
ALL-ROUND**

- The Professional 1000 Series consists of heavy and light tripods for demanding application conditions.
- The GST101 heavy wooden tripod is made from pine and proves itself for precise back-sights and control points.
- The GST103 aluminium tripod is particularly suitable for automatic levelling as well as for prism stations with reduced accuracy requirements.

### The stability of the original

Leica Geosystems tripods are manufactured solely from wood or aluminium. Wood, especially the beech and pine used by Leica Geosystems, offers the best stability values, measured on vertical movement and horizontal drift over time. Wood also exhibits optimal vibration characteristics and therefore delivers substantial

benefits, especially in the use of motorised TPS. The surfaces of the wooden tripods are sealed several times to prevent moisture absorption and to maximum longevity. Aluminium tripods are robust and save weight, their range of application is however limited.

# Original Tribrachs

Accuracy through torsional rigidity



Similarly to the stability of the tripod, that of the tribrach is a significant factor in measurement accuracy. The torsional rigidity, the most important criterion of a tribrach, is constantly controlled and tested during its production. The maintenance-free foot screws of the Leica Geosystems tribrach provide movement that is always smooth and free of play, even after years of use. The precise alignment of the support area to the base plate of the instrument assures extremely accurate forced centring. The optical plummet is so robust that the need for adjustment during the entire lifetime of the tribrach is practically unnecessary. Its construction predestines the tribrach for all applications, including extreme temperatures and high dust and humidity.



# Transparent Choice

## The ideal tribrach for your application

All original tribrachs comply with the strict specifications and quality standards of Leica Geosystems. Your choice should ideally be made according to your individual accuracy requirements.

### PROFESSIONAL 5000



**GDF121  
GDF122**

- The hysteresis of the Professional 5000 Series tribrachs is guaranteed to a maximum of 1" (0.3 mgon) or better.
- The foot screws are maintenance-free and ensure a movement that is smooth and free of play, even in the most severe environmental conditions.
- The tribrachs in this series are recommended for all tasks that require angle measurements of under 3".
- Due to the minimal hysteresis, we recommend use of the Professional 5000 Series for all motorised instruments.

### PROFESSIONAL 3000



**GDF111-1  
GDF112**

- The hysteresis of the Professional 3000 Series tribrachs amounts to a maximum of 3" (1.0 mgon).
- The foot screws are maintenance-free and have a larger diameter. This allows for fine adjustments, even when wearing work gloves under difficult environmental conditions.
- These tribrachs are suitable for non-motorised TPS instruments with angle accuracy from 5 to 7" and GNSS antenna stations as well as backsights and control points.

### PROFESSIONAL 1000



**GDF101  
GDF102**

- The hysteresis of the Professional 1000 Series tribrachs amounts to a maximum of 5" (1.5 mgon).
- The GDF is a cost effective tribrach which proves itself in use under normal environmental conditions.
- These tribrachs are suitable for non-motorised TPS instruments with angle accuracy of 7" and single frequency GNSS antenna stations.



### The torsional rigidity of the original

The accuracy with which a tribrach returns to its starting position once the instrument has stopped, is called torsional rigidity or hysteresis. This hysteresis is the relative movement between the top plate and the base plate of a tribrach that occurs through the rotation of a TPS instrument. The hysteresis has direct influence on the angular accuracy of the instrument – and that speaks for the original. To optimise the hysteresis as Leica Geosystems has done is complex and calls for the highest precision: a movement of the upper plate to the lower plate of 0.3µm corresponds to an angle error of 1". Especially motorised instruments with their high acceleration and brake power require tribrachs with very high torsional rigidity.

# Original Prisms

Maximum accuracy and range



The range of a prism results from, among other things, its coating and the glass geometry. A number of original prisms from Leica Geosystems have a special coating on the reflective surfaces – the Anti-Reflex Coating, and a copper coating on the reverse side. Without these, the range of distance measuring, ATR and Powersearch would be reduced by up to 30%. The workmanship and the durability of the copper coating are decisive for a long life. The glass dimensions, the position in the holder and with it the spatial orientation, are important for measuring accuracy.

Leica Geosystems prisms are manufactured from glass of the highest quality and furnished with optical coatings so that even under the most extreme environmental conditions, a long lifetime and maximum range of the highest accuracy can be achieved.

# Transparent Choice

## The optimal prism for your application

Leica Geosystems offers a transparent selection of prisms in various sizes for different areas of application.

### PROFESSIONAL 5000



#### HIGHEST ACCURACY

The prisms distinguish themselves through a centring accuracy of under 1mm and the best possible beam deviation of  $< 2''$  to achieve the maximum range.

#### ■ Standard Reflectors

For the most common applications. All prisms have an anti-reflex coating for to provide highest longevity as well as to minimize measurement errors in close ranges

#### ■ Special Reflectors

For highest precision with ingenious technology such as a precision metal housing, or those with carbon fibre strengthened prism axis.

#### ■ Mini Reflectors

High value, small format prisms for highest accuracy at close to medium range.

#### Centring Accuracy

Measurement errors occur if original prism holders are not used. Substitutes are not configured according to Leica Geosystems criterion and often exhibit displacement between prism, holder and mounting stub.

#### Range

The beam deviation of a prism defines the maximum range. The smaller the beam deviation (measured in angular seconds), the greater the directly reflected signal strength to the sender optic.

### PROFESSIONAL 3000



#### MAXIMUM LIFETIME

Optimised for common operating distances, these prisms exhibit a beam deviation of up to 8" The special working of the optical coating, unique on the market, provides an above average lifetime.

#### ■ Standard Reflectors

All-rounder prism with integrated target plate for standard applications.

#### ■ Special Reflectors

Optimised for long-term monitoring applications. The special anti-condensation construction with a patented filter guarantees reliable measurement ranges in difficult weather conditions. Choice of high-precision reflective tapes.

#### ■ Mini Reflectors

Easy to handle and light to transport mini prisms.

#### Lifetime

In contrast to many conventional prisms, the reflective copper coating on the reverse side of original prisms consists of a adhesive coating, a copper coating, a protective coating and an overlying coat of lacquer. Working together, the copper coating and the lacquer increase the life of the prism significantly. An additional anti-reflex coating on the sensitive front surface provides a tough resistance to scratches.

#### Measurement Accuracy

Measurement errors occur frequently at close ranges when prisms without anti-reflex coating are used, as the front of a prism always directly reflects a certain percentage of a signal.

### PROFESSIONAL 1000



#### COST EFFECTIVE MEASURING

Despite its attractive cost-performance ratio, the 1000 series fulfils the strict Leica Geosystems process controls as well as users' high demands regarding lifetime.

#### ■ Standard Reflectors

Round prism with optional target plate.

#### ■ Special Reflectors

Optimised for monitoring applications with high demands on the relative measurement accuracy. Robust metal bracket for simple and flexible assembly.

# Original Data Communication

## Secure data storage and transfer



Losing data after a work-filled day is frustrating and expensive. The electronic accessories from Leica Geosystems comply with a higher standard than the commercially available accessories that meet consumer or even industry standards. The storage media and other data transfer products from Leica Geosystems are qualitatively of extremely high value and reliability.



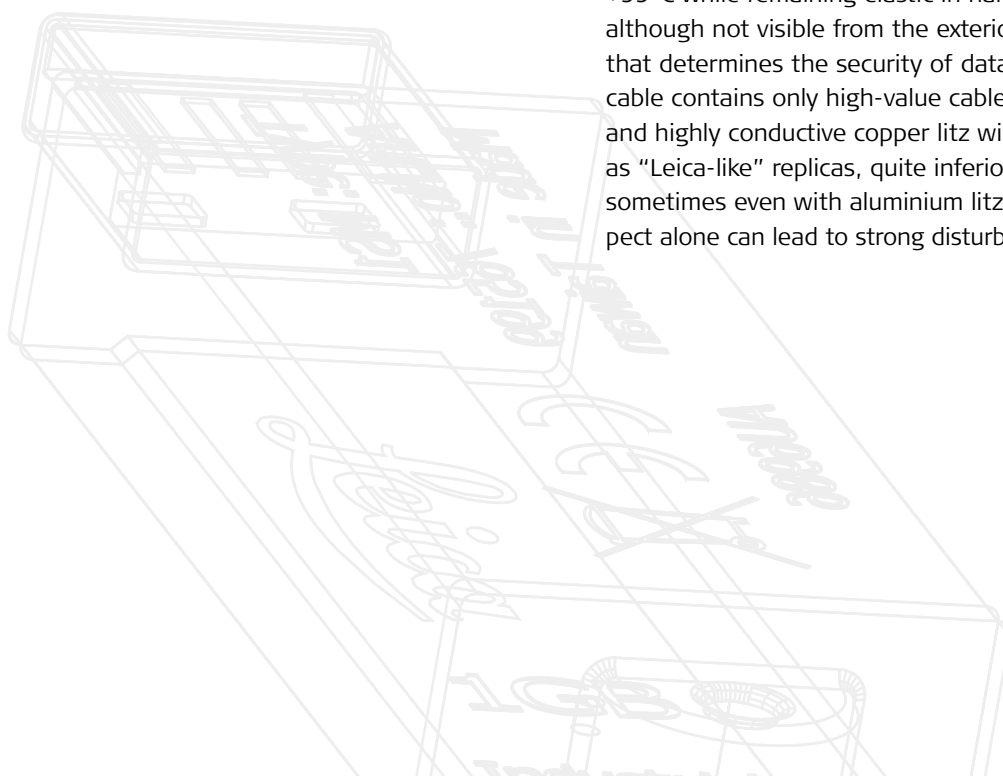
### Storage Media

Leica Geosystems storage media are perfectly matched to Leica Geosystems instruments and sensors. Compared to conventional devices on the market, that read or write single data, these instruments have a different functional principle. The TPS or GNSS instruments create a database on the memory card and switch constantly between different open files. Standard memory cards are unable to manage this required multi-tasking function. This leads to problems in data communication and is one of the main causes of data loss. Furthermore, the original storage media also function with highest reliability in extreme temperatures, handling shock and high humidity.

### Cable

The Leica Geosystems accessory program includes data transfer cables, power tension cables and antenna cables of the highest quality. For data transfer, Leica Geosystems offers serial and USB data cables. The data transfer over the cable from and to the instrument is therefore extremely reliable and secure, even in extreme heat, cold, snow and rain.

All Leica Geosystems cables are equipped with LEMO® plugs for outdoor use. The precision connections of recognized market leaders are found not only at Leica Geosystems, but also in other applications where similar quality demands are made, such as aviation, aerospace and medical technologies. A further significant quality component of the Leica Geosystems cable is its casing. It is constructed so that the cable can be stored at temperatures from  $-40^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$  and functions reliably at operating temperatures from  $-20^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$  while remaining elastic in handling. Last but not least, although not visible from the exterior, it is the cable material that determines the security of data transfer. The original cable contains only high-value cable casing, tested shielding and highly conductive copper litz wires. In other cables, such as "Leica-like" replicas, quite inferior value cable material, sometimes even with aluminium litz wires, is used. This aspect alone can lead to strong disturbances and transfer errors.





# Original Batteries and Chargers

## For reliable instrument function



At first glance, chargers and batteries do not seem to be especially important accessories. Perhaps they do not seem worth paying attention to for quality or origin. Experience shows the opposite. Instruments and their electronics react sensitively and need a reliable power supply in all environmental conditions. Batteries and chargers are also exposed to these conditions - some will function, others might and some not for long or not at all, under certain conditions. That is why the quality and efficiency of the originals also counts for batteries and chargers.

# Transparent Choice

## Perfect batteries and chargers

Leica Geosystems offers you a wide palette of high-value chargers and batteries. For chargers, you have the choice between the Professional 5000 Series with high functionality and intelligence and the Professional 3000 and 1000 Series, the cost-effective alternatives with less function, but outstanding quality and security.

### PROFESSIONAL 5000



#### INTELLIGENT CHARGER

- High-end charger, optimally designed for batteries used by Leica Geosystems.
- Intelligent battery recognition and controlled charging for longest battery service life.
- Charging and discharging cycles to refresh old cells.
- Intelligent trickle charging ensures that fully charged batteries are always ready for use.
- Through use of different charging trays, several charge combinations are possible.
- Up to 5 batteries are chargeable overnight.

### PROFESSIONAL 3000



#### MULTI-FUNCTIONAL CHARGER

- Cost effective mains power supply to charge one battery at a time.
- Built-in battery recognition for optimal charging.
- Includes car adapter cable
- GKL22: for all batteries with 5-pin charging socket, except GEB71.

### PROFESSIONAL 1000



#### SIMPLE CHARGER

- Can be directly plugged into Leica Viva series field controller or docking station in order to charge batteries without removal.

### The benefits of the originals

Chargers and batteries from Leica Geosystems are perfectly matched to each other and to the instruments, and reliably secure the power supply in the field. They achieve best values in regard to temperature tolerance, re-charging capability, operating time and cycle behaviour. Carefully and correctly handled, Leica Geosystems batteries achieve a maximum service life and are a guarantee that in decisive moments enough energy is available in the instrument, so that a measurement can be exactly and correctly completed.

### Quality and Safety Requirements

- Only brand battery cells
- Integrated microchip for intelligent charging
- Integrated temperature sensor as protection against over-heating
- Integrated protection against short circuits
- Gold-coated contacts
- IP 54 tested against rain and splash water
- Resilience against high mechanical influences
- Electronics protect against deep discharge and current peaks on charging, that could damage the batteries.



# Leica Geosystems Original Accessories Program

Tripods	18
Tribrachs	20
Carriers	21
Standard-Reflectors	22
Special-Reflectors	23
Mini-Reflectors	24
Containers & Bags	25
Reflector Poles	26
GNSS Poles	27
Accessories for Poles	28
DNA Levelling Staffs	29
Data Storage	30
Eyepieces	31
Chargers	32
Batteries	33
Cable	34

# Tripods

## PROFESSIONAL 5000



### **GST20, Wooden Tripod**

Heavy duty tripod with plumb bob, carrying strap and side clamp screws. Proven long-life, twist-proof and excellent vibration characteristics. Packaged length 110cm (3.61ft), extendible to 180cm (5.91ft), weight 6.4kg (14.1lb).

**Order No: 296 632**



### **GST120-9, Wooden Tripod**

Heavy duty self-closing tripod with carrying strap and side clamp screws. Proven long-life, twist-proof and excellent vibration characteristics. Packaged length 110cm (3.61ft), extendible to 180cm (5.91ft), weight 6.4kg (14.1lb).

**Order No: 667 301**



### **GST20-9, Wooden Tripod**

Heavy duty tripod with carrying strap and side clamp screws. Proven long-life, twist-proof and excellent vibration characteristics. Packaged length 110cm (3.61ft), extendible to 180cm (5.91ft), weight 6.4kg (14.1lb).

**Order No: 394 752**



### **GST40, Wooden Tripod**

Heavy duty tripod with rigid legs, suitable for precision levelling. Proven long-life, twist-proof and excellent vibration characteristics. Length 170cm (5.58ft), weight 6.0kg (13.2lb).

**Order No: 328 422**



## PROFESSIONAL 3000



### **GST05, Wooden Tripod**

Light duty tripod with water-tight plastic wrap for complete protection. Suitable for TPS-Instruments with angular measurement accuracy above 5", reflectors and GNSS antennas. Packaged length 107cm (3.51ft), extendible to 176cm (5.77ft), weight 5.6kg (12.3lb).

**Order No: 399 244**



### **GST05L, Aluminium Tripod**

Light duty tripod with shoulder strap. Light-weight and long lasting making it suitable for GNSS antennas, prisms and levels. Packaged length 107cm (3.51ft), extendible to 176cm (5.77ft), weight 4.6kg (10.1lb).

**Order No: 563 630**

## PROFESSIONAL 1000



### **GST101 Wooden Tripod**

Heavy duty tripod with carrying straps and side clamp screws. A cost effective alternative for TPS-Instruments with angular measurement accuracy above 5" and reflectors. Packaged length 104cm (3.41ft), extendible to 166cm (5.45ft), weight 5.7kg (12.6lb).

**Order No: 726 831**



### **GST103 Aluminium Tripod**

Light tripod with carrying straps and side clamp screws. A cost effective alternative for levels, lasers and reflectors. Packaged length 105cm (3.44ft), extendible to 167cm (5.48ft), weight 4.5kg (9.9lb).

**Order No: 726 833**

## ACCESSORIES FOR TRIPODS



### **GST4, Tripod Star**

For the secure set-up of tripods on slippery surfaces.

**Order No: 332 200**



### **GHT43, Tripod Bracket**

Adapter for mounting the TCPS radio on all tripods.

**Order No: 734 163**



### **GHT58, Tripod Bracket**

Adapter to mount the Leica GFU radios on all tripods.

**Order No: 748 417**

# Tribrachs

## PROFESSIONAL 5000



### **GDF121, Tribrach without Plummet**

High accuracy, maintenance free tribrach. Individually tested. Suitable for all high angular accuracy requirements. Torsional stiffness < 1", weight 780 grams (1.72 lb).

**Order No: 667 304**

## PROFESSIONAL 3000



### **GDF111-1, Tribrach without Plummet**

Suitable for TPS instruments with an angular accuracy of greater than 3". The footscrews have a large diameter which permits fine adjustment even when wearing work gloves. Torsional stiffness < 3", weight 780 grams (1.72 lb).

**Order No: 748 888**

## PROFESSIONAL 1000



### **GDF101, Tribrach without Plummet**

A cost effective tribrach suitable for use in normal environments. Suitable for all light-weight instruments of low angular accuracy. Black colour. Torsional stiffness < 5", weight 780 grams (1.72 lb).

**Order No: 726 839**



### **GDF122, Tribrach with Optical Plummet**

High accuracy, maintenance free tribrach. Individually tested. The optical plummet is of robust construction, virtually eliminating the need for adjustment during the lifetime of the tribrach. Torsional stiffness < 1", weight 860 grams (1.90 lb).

**Order No: 667 307**



### **GDF112, Tribrach with Optical Plummet**

The tribrach and optical plummet are of robust construction and suitable for long period exposure in all environments. This makes the GDF112 ideal for GNSS and backsights and control points. Torsional stiffness < 3", weight 670 grams (1.48 lb).

**Order No: 667 308**



### **GDF102 Tribrach with Optical Plummet**

A cost effective tribrach with optical plummet for use in normal environments. Suitable for GNSS antennas. Torsional < 5", weight 860 grams (1.90 lb).

**Order No: 726 840**

## ACCESSORIES FOR TRIBRACHS



### **GHM007, Height Meter**

For quick and easy instrument height measurement. The specially scaled tape, accurately displays the height to the centre of the TPS telescope or prism centre. The GHT196 holder is additionally required.

**Order No: 667 718**



### **GHT196, Holder for Height Meter**

For attachment of the GHM007 height meter to any Leica Geosystems tribrach.

**Order No: 722 045**

# Carriers

## PROFESSIONAL 5000



### **SNLL121, Precision Carrier with Laser Plummet**

The laser provides convenient setting up even in conditions of poor visibility. Supplied with 4x AA-size alkaline batteries. Reflector centring accuracy 0.3mm, plummet accuracy 1.0mm at 1.5m.

**Order No: 667 316**

## PROFESSIONAL 3000



### **GRT144, Carrier with Stub**

Simple carrier for use in tribrachs with optical plummet. Suitable for reflectors with stub fitting.

Centring accuracy 1.0mm.

**Order No: 667 313**



### **GRT146, Carrier with 5/8" Thread**

Simple carrier for use in tribrachs with optical plummet. For direct fitting of GNSS antennas. Centring accuracy 1.0mm.

**Order No: 667 216**



### **GZR3, Precision Carrier with Optical Plummet**

With high accuracy optical plummet and longitudinal bubble for exact positioning over measurement points. Reflector centring accuracy 0.3mm, plummet accuracy 0.5mm at 1.5m.

**Order No: 428 340**



### **GZR103, Carrier with Optical Plummet**

Rotatable carrier with longitudinal bubble for use in tribrachs without plummet. Reflector centring accuracy 1.0mm, plummet accuracy 0.5mm at 1.5m.

**Order No: 725 566**



### **GRT247, Carrier with 5/8" Thread for GS15**

Simple carrier for use in tribrachs with optical plummet. For direct fitting of GS15 GNSS receiver. Centring accuracy 1.0mm.

**Order No: 770 715**

## ACCESSORIES FOR CARRIERS



### **GAD31, Screw-to-Stub Adapter**

For mounting of GNSS antennas to poles and carriers with stub.

**Order No: 667 217**



### **GZS4, Height Hook**

Hook for positioning a tape measure directly below the tribrach. Connects to all Leica Geosystems carriers. To precisely measure the height of GNSS antennas and reflectors. With integrated tape measure graduated in mm and inches.

**Order No: 667 244**

# Standard-Reflectors

## PROFESSIONAL 5000



### GPR121, Circular Prism with Holder

Precision circular prism with anti-reflex coating, mounted in metal holder. Supplied with removable target plate. Centring accuracy 1.0mm, range 3500m.

**Order No: 641 617**

## PROFESSIONAL 3000



### GPR111, Circular Prism with Holder

Circular prism, sealed in red polymer holder. Large integrated target plate provides good visibility. Centring accuracy 2.0mm, range 2500m.

**Order No: 641 618**

## PROFESSIONAL 1000



### GPR113, Circular Prism with Holder

Circular prism mounted in red polymer holder. Suitable for fitting of the 362823 GZT4 target plate. Centring accuracy 2.0mm, range 2500m.

**Order No: 753 492**



### GPR1, Circular Prism

Precision circular prism with anti-reflex coating. Suitable for mounting in GPH1 and GPH3 holders. Centring accuracy 1.0mm, range 3500m.

**Order No: 362 830**

## ACCESSORIES FOR STANDARD-REFLECTORS



### GPH1, Prism Holder

Holder for one GPR1 circular prism. The 362823 GZT4 target plate can be attached to this holder.

**Order No: 362 820**



### GPH3, Prism Holder

Holder for three GPR1 circular prisms. Provides extremely long distance measuring range, up to 5400m with prism mode.

**Order No: 400 080**



### GRZ4, 360° Prism

Suitable for all robotic TPS work performed with a survey pole. Large rubber mountings protect the prism. Overall 3D pointing accuracy of 5.0mm. When aiming on a side marked by a yellow arrow, an accuracy of better than 2.0mm can be achieved. ATR range of 600m (2000ft).

**Order No: 639 985**



### GZT4 Target Plate for GPH1

Target plate, mountable on the GPH1 and GPR113 prism holder.

**Order No: 362 823**

# Special-Reflectors

## PROFESSIONAL 5000



### GPH1P, Precision Prism

Precisely machined reflector, for high accuracy requirements. The prism diop- ter is slightly tilted to prevent any EDM reflection from the front surface, thereby increasing measurement accuracy. Cent- ring accuracy 0.3mm, range 3500m.

**Order No: 555 631**

## PROFESSIONAL 3000



### GPR112, Monitoring Prism

Large diameter monitoring prism for long range measurements. For installati- on on M8 or 5/8" threaded bolts. Built- in filter prevents condensation on the reflecting surface. Rain/snow cover available separately. range 2500m.

**Order No: 726 295**

## PROFESSIONAL 1000



### GMP104, Monitoring Mini Prism

Mini monitoring prism mounted in me- tal holder. Supplied with L-bar for fixed installations. The prism offset is depen- dant on the mounting position. range 2000m (7000ft).

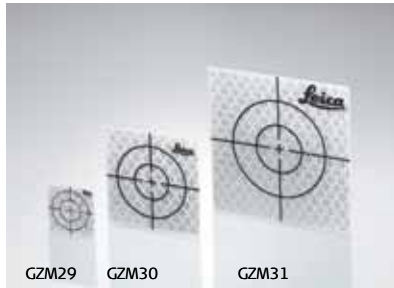
**Order No: 641 762**



### GRZ122, 360° Prism

The high performance GRZ122 allows connectivity to the Leica SmartAntenna. The built-in point allows the reflector to be positioned directly on a survey mark, at a height of 78mm. Overall 3D poin- ting accuracy is 2.0mm. ATR range of 600m.

**Order No: 754 384**



### GZM29/30/31 Reflective Tapes

Self-adhesive, reflective tapes supplied in pack of 20 pieces.

**GZM29:** 20x20mm, for measurements up to 100m (330ft). **Order No: 763 532**

**GZM30:** 40x40mm, for measurements up to 200m (650ft). **Order No: 763 533**

**GZM31:** 60x60mm, for measurements up to 250m (800ft). **Order No: 763 534**



### GPR105, Double Sided Reflector

This unique reflector provides two back-to-back prisms, both with 0-cons- tant. With 1/4" fitting, suitable for mounting on GLS105 reflector pole. range 250m (800ft).

**Order No: 731 346**

## ACCESSORIES FOR GPR112



### GHT112 Mounting Set for GPR112

Mounting set for GPR112 with M8 and 5/8" internal thread adapters, suitable for direct fixing systems on nearly every surface, prism is adjustable and fixable in two axes.

**Order No: 726 296**



### GDZ112, Rain Shelter for GPR112

Rain shelter for Monitoring Mining Prism GPR112. Full availability of the prism even in rainy conditions. The rain shelter protects the prism front against rain drops and dust.

**Order No: 727 406**



# Mini-Reflectors

## PROFESSIONAL 5000



### GMP101, Mini Prism Set

Mini prism mounted in metal holder. Includes a circular bubble, removable target plate, spike and padded bag. Prism constant of +17.5mm, Centring accuracy 1.0mm, range 2000m (7000ft).

**Order No: 641 662**



### GRZ101, 360° Mini Reflector

Suitable for short range ATR applications. Due to its small size, the GRZ101 provides the greatest pointing accuracy of 1.5mm. With the GAD103 adapter, this reflector can be mounted on all poles with stub fitting. ATR range of 350m (1150ft).

**Order No: 644 327**

## PROFESSIONAL 3000



### GMP111, Mini Prism with Holder

Mini prism mounted in polymer holder with 1/4" thread fittings. Includes circular bubble, GLS115 four-section pole and point. Prism constant of +17.5mm, range 2000m.

**Order No: 641 615**



### GMP111-0, Mini Prism with Holder

Mini prism mounted in polymer holder with 1/4" thread fittings. Includes circular bubble, GLS115 four-section pole and point. Leica 0-prism constant, max. IR range of 2000m (7000ft).

**Order No: 642 534**

## ACCESSORIES FOR MINI REFLECTORS



### GAD103, Mini Prism Adaptor

Adapter for attaching the GRZ101 to poles and carriers with stub. Provides the same height offset as for standard reflectors.

**Order No: 742 006**



### GAD105, Mini Prism Adaptor

Adapter for attaching the GMP111, GMP111-0 to poles and carriers with stub. Provides the same height offset as for standard reflectors.

**Order No: 743 503**



### GMP112, Hidden Point Pole

Hidden Point Pole extension for GMP111. Includes mini reflector and 30cm adapter pole. Provides prism separation of 40, 70 and 100cm.

**Order No: 742 329**



### GVP608, Soft Bag

Bag for GMP111, GMP111-0, GRZ101 mini prisms and the GLS115 pole set.

**Order No: 642 344**

# Containers & Bags

## HARD-TOP CASES, BACKPACKS, BAGS



sample picture

### **GVP609, Container for Accessory**

For 2 reflectors (GPR121, GPR111, GPH1 with GPR1, GRZ4 or GPH1P), 2 carriers (GZR3, SNLL121, GZR103 or GRT144), 2 tribrachs (all types), GZT4 target plate and GHM007 height meter.

**Order No: 667 451**

### **GVP623, Container for System 1200**

For GX1200+ receiver, AS10 GNSS antenna, RX1210 field controller, cables, accessories. **Order No: 733 267**

### **GVP639, Container for GS09**

For 2x GS09 GNSS antennas, CS09 field controller, GHT56 holder, 2x GFU radios, cables, accessories. **Order No: 753 895**

### **GVP640, Container for Smartstation**

For Smartstation, Smartpole, GS09 GNSS SmartAntenna, CS09 field controller, GRZ122 360° prism. **Order No: 754 598**

**GVP641, Container for GS15 Base and Rover** 2x GS15 GNSS SmartAntennas and CS15/CS10 field controller. For the transport of a GS15 base station and GS15 rover with all accessories.

**Order No: 767 827**

**GVP642, Container for GS15 SmartPole and Station** For GS15 SmartAntenna and CS15/CS10 field controller. For the transport of a GS15 rover, all accessories, SmartStation and SmartPole.

**Order No: 767 828**

### **GVP646, Container for GS10**

For GS10 receiver, antenna and CS15/CS10 field controller. Allows a GS10 receiver and all accessories for a base station to be transported. **Order No: 770706**

### **GVP654 Container for CS10/15 and**

**GS05/06** For 2 CS10/CS15 field controller with or without GS05/GS06 receivers and external GNSS antenna. For the transport of a complete GNSS Station Setup including accessories. **Order No: 770 709**



### **GVP643, Soft Bag for CS10 Field Controller**

Soft bag for CS10 field controller for transportation and protection against dirt. Including belt loop.

**Order No: 767 904**



### **GVP644, Soft Bag for CS15 Field Controller**

Soft bag for CS15 field controller for transportation and protection against dirt. Including belt loop.

**Order No: 767 905**



### **GVP603, Backpack**

Mammut Backpack, for carrying GNSS receiver and modems.

**Order No: 667 137**



### **GVP102, Soft Bag for Prism Station**

Soft bag with shoulder strap, for prism station, consist of tribrach, prism carrier or laser plummet and prism.

**Order No: 727 589**

## ACCESSORIES FOR CONTAINERS



### **GDZ66, Back Strap**

Set of two back straps, for all containers with suitable mountings. The container can still be opened while the straps are attached.

**Order No: 744 501**

# Reflector Poles

## PROFESSIONAL 5000



GLS12 GLS12F

### GLS12, Telescopic Pole

Pole with snap locks to prevent any pole slip. Suitable for the GRZ122 reflector together with GS09 antenna. Graduated in cm, min. length 1.39m, extendible to 2.0m, weight 950 grams.

**Order No: 754 391**

### GLS12F, Telescopic Pole

Pole with snap locks to prevent any pole slip. Suitable for the GRZ122 reflector together with GS09 antenna. Graduated in ft, min. length 4.56ft, extendible to 6.56ft, weight 2.09lb.

**Order No: 754 389**



### GLS14, Mini Pole

Mini reflector pole for exact positioning of the reflector over a survey mark. Provides a prism height of 20cm (0.66ft).

**Order No: 403 427**

## PROFESSIONAL 3000



GLS11 GLS111 GLS112

### GLS11, Telescopic Pole

Reflector pole with quick release clamp for easy and rapid height adjustment. Graduated in cm and ft, min. length 1.24m (4.07ft), extendible to 2.15m (7.05ft), weight 940g (2.07lb).

**Order No: 385 500**

### GLS111, Telescopic Pole

Heavy duty reflector pole with red/white markings for high visibility. Twist lock provides easy and secure tightening. Graduated in cm and ft, min. length 1.40m (4.59ft), extendible to 2.60m (8.53ft), weight 1.48kg (3.26lb).

**Order No: 667 309**

### GLS112, Telescopic Pole

Heavy duty reflector pole with red/white markings for high visibility. Twist lock provides easy and secure tightening. Graduated in cm and ft, min. length 1.47m (4.82ft), extendible to 3.60m (11.81ft), weight 1.88kg (4.14lb).

**Order No: 667 310**

## PROFESSIONAL 1000



### GLS105, Telescopic Pole

Reflector pole with twist- and snap locks to prevent any pole slip. With 1/4" thread for mounting of GMP111 and GPR105 reflectors. Min. length 1.28m (4.20ft), extendible to 2.11m (6.92ft), weight 890g (1.96lb).

**Order No: 748 967**



### GLS115, Mini Pole

Set of four screw-together sections and point with 1/4" threads. Suitable for GMP111, GRZ101 and GPR105 reflectors. Provides prism heights of 10, 40, 70, 100 or 130cm. For prisms without bubble a additional clip on bubble is available. (GLI115, 747895)

**Order No: 642 106**

# GNSS Poles

## PROFESSIONAL 5000



### GLS30, Telescopic Carbon Fibre GNSS Pole

Carbon fibre pole with snap lock at 2.00m (6.56ft) and 1.80m (5.91ft) for rapid setup. Min. length 1.36m (4.46ft), light weight at 730g (1.60lb).

**Order No: 752 292**

### GLS31 Telescopic Carbon Fibre SmartPole

Carbon fibre pole with snap lock at 2.00m for GRZ122 360° prism and GNSS antenna. Min. length 1.36m (4.46ft), light weight at 730g (1.60lb).

**Order No: 766 359**

## PROFESSIONAL 3000



### GLS12, Telescopic Aluminium SmartPole

Pole with snap locks to prevent any pole slip. Suitable for the GRZ122 360° prism and GS09 antenna. Graduated in cm, min. length 1.39m, extendible to 2.0m, weight 950 grams.

**Order No: 754 391**

### GLS13 Telescopic Aluminium GNSS Pole

Aluminium GNSS pole with 5/8" screw. Snap locks at 1.80m and 2.00m. Includes circular bubble. Min. length, 1.39m, weight 950g

**Order No: 768 226**

## ACCESSORIES FOR EXT. ANTENNAS



**GAD108, Arm for UHF,GSM Antenna to GS15** Arm to mount external UHF/ GSM antenna to GS15 SmartAntenna, useful in areas of poor radio or cellphone network reception. Gainflex antenna fits on arm. **Order No: 767 790**



**GAD33, Arm 15cm for UHF/GSM Antenna** Arm 15cm long, attaches to GNSS antenna. Gainflex antenna fits on arm. Antenna cable connects to arm. **Order No: 667 219**



**GAD34, Arm 3cm for UHF/GSM Antenna** Arm 3cm long, screws on telescopic rod with 5/8" screw. UHF/GSM antenna fits on arm. Antenna cable connects to arm. **Order No: 667220**

## ACCESSORIES FOR GNSS POLES



### GAD32, Telescopic Rod

Telescopic rod with 5/8" screw. Fits in 667137 GVP603 backpack, for Radio and GNSS antenna mounting. Can be secured on a tripod using the 667236 GHT36 adapter.

**Order No: 667 228**



**GAD46, Double Arm for UHF/GSM Antennas** Double arm adapter, screws on telescopic rod. Allows to connect up to 2 UHF/GSM antennas and up to 2 antenna cables on arm. **Order No: 734388**

# Accessories for Reflector Poles

## ACCESSORIES FOR REFLECTOR POLES AND GNSS POLES



### **GSR2, Dual Strut Support**

With 2 telescopic legs, for rapid set-up of Ø 25mm poles.

**Order No: 555 720**



### **GZW12, Pole Extension**

Extends all poles with stub fitting, by 1.00m (3.28ft).

**Order No: 403 428**



### **GHT36, Base for Telescopic Rod on Tripod**

Base with 5/8 inch screw, for setting up telescopic rod on tripod.

**Order No: 667 236**



### **GSR111, Dual Strut Support**

With 2 telescopic legs, for rapid set-up. Suitable for poles of all diameters.

**Order No: 667 319**



### **GHT62 Holder for Field Controller**

Adjustable pole holder for Leica Viva field controller.

**Order No: 767 879**



### **GHT63 Poleclamp for Field Controller Holder**

Poleclamp to attach a holder GHT39, GHT56 or GHT62 to every telescopic pole. **Order No: 767 880**



### **GST6, Quickstand**

With 3 telescopic legs, provides an extremely stable support for Ø 25mm poles.

**Order No: 560 138**



### **GHT64 Holder for GFU or GSM**

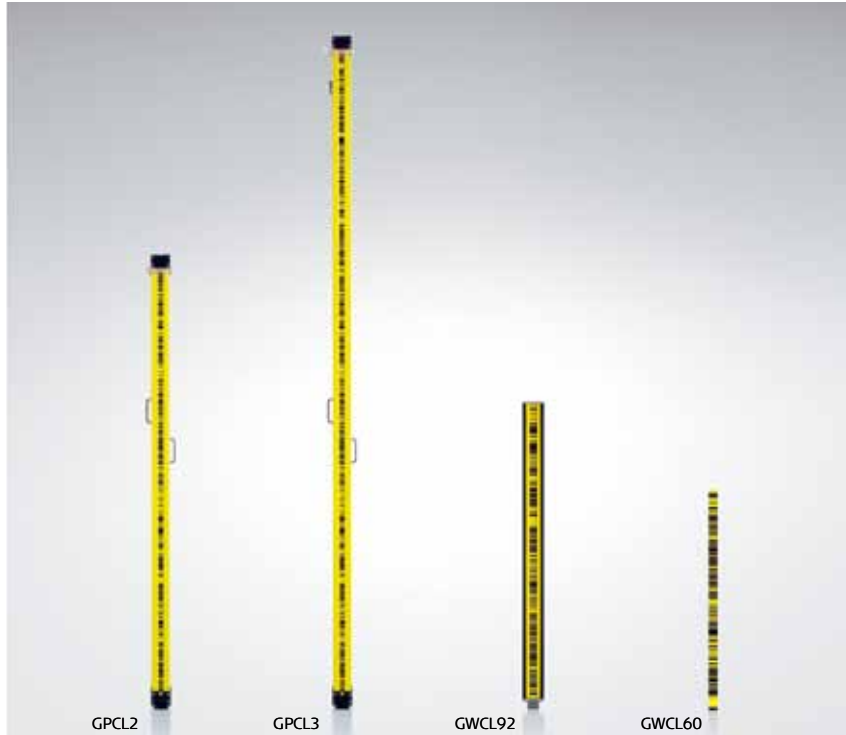
**Modems** Holds GFU or GSM Modems with strong hook and loop fastener. Mountable on all GNSS poles.

**Order No: 767 896**



# DNA Levelling Staffs

## PROFESSIONAL 5000



### **GPCL2, Invar Staff with Bar Code**

Precision levelling staff with 2 circular bubbles. The two attached handles provide steady positioning. Length 2.0m (5.56ft), weight 4.2kg (9.3lb).

**Order No: 563 659**

### **GPCL3, Invar Staff with Bar Code**

Precision levelling staff with 2 circular bubbles. The two attached handles provide steady positioning. Length 3.0m (9.84ft), weight 4.9kg (10.8lb).

**Order No: 560 271**

### **GPCL3, Invar Staff with Certificates**

Precision staff, individually measured for accuracy. Supplied with expansion co-efficient and length calibration certificates. Length 3.0m (9.84ft), weight 4.9kg (10.8lb).

**Order No: 560 274**

### **GWCL92, Invar Staff with Bar Code**

Light-weight staff with circular bubble. Interchangeable edge or pin base, suitable for industrial applications. Length 92cm (3.02ft), weight 1.7kg (3.7lb).

**Order No: 632 313**

### **GWCL60, Invar Scale with Bar Code**

Invar scale with screw holes allow for attachment directly to structures. Ideal for long-term height monitoring applications. Dimensions of 600 x 25 x 1.5mm, for measuring range of 1.8 - 20m (6 - 65ft).

**Order No: 563 733**

## PROFESSIONAL 3000



### **GTL4M, Telescopic Fiberglass Staff**

Four-section telescopic staff. Dual measuring faces with bar code and mm graduations. Incl. transport bag. Length 1.2m (3.94ft) to 4.0m (13.12ft), weight 2.2kg (4.9lb), coefficient of expansion 10ppm/°C. **Order No: 757761**

### **GTL4C, Telescopic Aluminium Staff**

Four-section telescopic staff. Dual measuring faces with bar code and mm graduations. Incl. transport bag. Length 1.2m (3.94ft) to 4.0m (13.12ft), weight 1.8kg (4.0lb), coefficient of expansion 24ppm/°C. **Order No: 667 113**

### **GKNL4M, Sectioned Fiberglass Staff**

3 connectable sections. Dual measuring faces with bar code and cm graduations. Incl. transport bag and 2 handles. Length 1.6m to 4.0m, weight 4.4kg, coefficient of expansion 10ppm/°C. **Order No: 522 794**

### **GKNL4F, Sectioned Fibreglass Staff**

Levelling staff in 3 connectable sections. Dual measuring faces with bar code and ft graduations. Incl. transport bag and 2 handles. Length 5.18ft to 13.12ft, weight 9.7lb, coefficient of expansion 10ppm/°C. **Order No: 522 793**

# Data Storage

## MEMORY CARDS AND CARD READERS



### **MCF256 CompactFlash Card 256MB**

Compact Flash memory card. Capacity 256 MB. These ruggedized industrial card protect data even when dropped and in extreme environmental conditions. **Order No: 733 257**



### **MCF1000 CompactFlash Card 1GB**

Compact Flash memory card. Capacity 1GB. These ruggedized industrial card protect data even when dropped and in extreme environmental conditions. **Order No: 745 995**



### **MCR7 USB Card Reader for SD and CF Cards**

Omnidrive card reader for SD and CF cards. Guaranteed secure data transfers with USB connection to all PC operating systems. **Order No: 767 895**



### **MCFAD1, CF-Card Adapter**

Adapts a CompactFlash card to PCMCIA size. Allows use of the 32MB CF-card in DNA, GPS500 and TPS1100 instruments. **Order No: 733 258**



### **MSD1000, SD Memory Card 1GB**

Secure Digital memory card. capacity 1GB. These ruggedized industrial card protect data even when dropped and in extreme environmental conditions. **Order No: 767 856**



### **MCR8, USB Card Reader for SD, CF and SRAM Cards**

Omnidrive card reader for SD, CF and SRAM cards. Secure data transfers with USB connection to all PC operating systems. CF cards only with MCFAD1 useable. **Order No: 776 240**

## ACCESSORIES FOR LEICA VIVA FIELD CONTROLLER



### **CCS01, Docking Station for Leica Viva Field Controller**

For easy charging and data transfer to PC. CS field controller with attached holder can be placed into the docking station. Includes USB data transfer cable. **Order No: 767 906**



### **GHT61 Hand Strap for Leica Viva Field Controller**

Hand strap for field controller with utility hook for attaching to a belt or tripod. **Order No: 767 877**



### **SPF01 Screen Foil for Leica Viva Field Controller**

Anti-glare display foils for field controller. 2 pieces per pack. **Order No: 767 907**

# Eyepieces

## VERTEX EYEPIECES AND ANCILLARY LENSES



### **GVO13, Solar Filter**

Attaches to the objective of all TPS instruments. Protects eyesight and EDM electronics when sighting bright objects. **Order No: 743 504**



### **GFZ3, Diagonal Eyepiece**

For comfortable observations of steep sights, up to the zenith. Fits all TPS instruments. Includes objective counterweight. **Order No: 734 514**



### **GOK6, Diagonal Eyepiece**

For comfortable observations of steep sights, up to 66°. Has a variable joint for the adjusting the sighting angle. Fits all TPS instruments. Includes objective counterweight. **Order No: 376 236**



### **GOA2, Autocollimation Eyepiece**

To perform autocollimation with any TPS instrument. The 394787 GEB62 Plug-in Lamp and 394792 GEB63 Battery Box are additionally required. **Order No: 199 899**



### **FOK53, Magnification Eyepiece**

Exchangable eyepiece for increasing telescope magnification to 42x (Requires fitting by a Leica Geosystems Service Centre). **Order No: 377 802**

# Chargers

## PROFESSIONAL 5000



GDI221 and GDI222

### GKL221, Charging Station

Intelligent charging ensures long battery life. Possible to connect up to 5 batteries simultaneously. Includes country specific mains connection and cable to connect batteries with 5-pin charging socket. **Order No: 733 271**



### GDI221, Charging Adapter

Adapter for charging 2 Li-Ion batteries, GEB211, GEB212, GEB221 or GEB241. **Order No: 733 323**



### GDI222, Charging Adapter

Adapter for charging 2 NiMh batteries, GEB121 or GEB111. A charging cable is included for all batteries with 5-pin charging socket. **Order No: 733 322**



### GDC221, Car Adapter Cable

For connecting the GKL221 to a 12V - 24V power source, at the cigarette lighter socket. Built-in electronics protect the charger from power surges. **Order No: 734 389**

## PROFESSIONAL 3000



### GKL211, Battery Charger

Simple, low-cost charger for GEB211, GEB212 and GEB211 Li-Ion batteries. Includes car adapter cable. **Order No: 734 752**



### GKL112, Battery Charger

Simple, low-cost charger for GEB121 and GEB111 NiMh batteries. Includes car adapter cable. **Order No: 734 753**



### GKL22, Battery Charger

For batteries with 5-pin charging socket. Timed charge of 14 hours at a current of 200mA. With Euro-type plug, 230V input. **Order No: 636 983**



### GKL22-1, Battery Charger

Simple charger for batteries with 5-pin charging socket. Timed charge of 14 hours at a current of 200mA. With US-type plug, 115V input. **Order No: 639 959**

## PROFESSIONAL 1000



### GEV235, AC/DC-Adapter for Leica Viva Field Controller

AC/DC-adapter, power supply for Leica Viva field controller.

### GEV235, AC/DC-Adapter for EU

**Order No: 767900**

### GEV235-1, AC/DC-Adapter for US

**Order No: 773753**

### GEV235-2, AC/DC-Adapter for JP

**Order No: 773754**

### GEV235-3, AC/DC-Adapter for UK

**Order No: 773755**

### GEV235-4, AC/DC-Adapter for AUS

**Order No: 773756**

# Batteries

## INTERNAL BATTERIES



### **GEB241 Li-Ion Battery**

High output battery for TM30/TS30 Instruments, 14.8V / 4.8Ah

**Order No: 754834**



### **GEB221, Li-Ion Battery**

High output battery for all System 1200, flexline instruments, GS10 GNSS receivers and Piper 100/200, 7.4V / 4.4Ah.

**Order No: 733 270**



### **GEB212 Li-Ionen Batterie**

High output battery with extended capacity for field controller and GNSS receiver, 7.4V / 2.6Ah.

**Order No: 772 806**



### **GEB211, Li-Ion Battery**

High output battery for field controller, 7.4V / 2.2Ah.

**Order No: 733 269**



### **GEB121, NiMH Battery**

Low maintenance battery for TPS400/800 and Builder instruments, 6.0V / 4.2Ah.

**Order No: 667 123**



### **GEB111, NiMH Battery**

Low maintenance battery for TPS400/800 and DNA instruments, 6.0V / 2.1Ah.

**Order No: 667 318**



### **GEB187, NiMH Battery**

Battery for TPS1000 and TPS2000 series instruments, 12V / 1,8Ah.

**Order No: 667 147**

## EXTERNAL BATTERIES



### **GEB171, External NiMH Battery**

High output battery for set-ups over long periods, 12V / 9.0Ah. With 5-pin charging socket. Weight 2.0kg (4.4lb).

**Order No: 727 367**



### **GEV208, Power Supply**

Mains adapter for uninterrupted power supply. Connects to all Leica Geosystems power cables. Country specific mains cable available separately. AC input 100V-240V.

**Order No: 749 279**

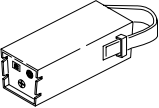
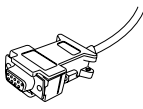
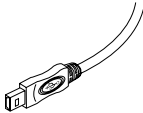




### **GEV71, Power Cable**

4m cable for 12V battery power supply. Protects the instrument from damage due to pole reversal and voltage spikes.

**Order No: 439 038**

# Cable

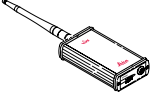
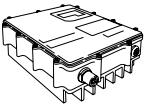
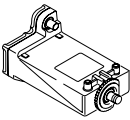


DEVICE	INSTRUMENT	ART.	SIGN	DESCRIPTION
<b>GEB171 or GEV208</b>  	TS02/06/09 TPS1200/1800/2003 DNA	409678	GEV52	Power cable, 1.8m, connects TPS/TS or DNA to external battery
	GS10	560130	GEV97	Power cable, 1.8m, connects GS10 to external battery
	GRX1200.GS10/GS15	733298	GEV172	Y-cable, 2.8m, connects GRX/GS with two external power supplies
	CS09.GS09	756365	GEV215	Y-cable, 2.0m, connects CS09 - GS09 - Batterie
	GS09/GS15	748418	GEV205	Y-cable, 1.8m, connects GS09/GS15 - GFU Batterie
	TS30/GS15/CS10*/CS15*	758469	GEV219	Power cable, 1.8m, connects TS30/GS15 to external battery
<hr/>				
<b>12V car battery</b>	All instruments	439038	GEV71	Power cable, 4m, connects all battery cables to 12V car battery
<hr/>				
<b>PC-RS232 Port</b>  	TS02/06/09 TPS1200/1800/2003 DNA	563625	GEV102	Data cable, 2m, connects to PC (RS232)
	TS02/06/09 TPS1200/1800/2003 DNA	734698	GEV187	Y-cable, 2m, connects TS/TPS/DNA - PC - Batterie
	GRX1200/GS10/GS15	733280	GEV160	Data cable, 2.8m, connects GX port 1, 2, 3, (port 3 not for GS15)
	TS30/GS10/GS15/CS10*/CS15*	733282	GEV162	Data cable, 2.8m, connects TS/GS/CS to PC (RS232)
	GFU14	733297	GEV171	Y-program cable, 1.8m, for the Sateline 3AS radio modem inside the GFU14 housing
	SLR1/2/3	767803	GEV231	Program adapter cable ,1.8m, for SLR radios
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<b>PC-USB port</b>  	TS02/06/09 TPS1200/1800/2003 DNA	734700	GEV189	Serial Data transfer cable, 2m, TS/TPS/DNA Lemo to USB
	GRX1200/GS10/GS15	734755	GEV195	Serial Data transfer cable, 2m, connects GX port 1, 2, 3, (port 3 not for GS15) to PC
	TS30/GS10/GS15/CS10/CS15	758468	GEV218	Serial Data transfer cable, 2m, connects TS30/GS/CS to USB
	GS10/GS15/CS10/CS15/GS09/CS09	767899	GEV234	USB data cable, 1.65 m, connects CS to GS or CS to PC (USB)
	TS02/06/09/CS10**/CS15**	764700	GEV223	USB Data cable, 1.8m, TS/CS Mini-USB to USB
<hr/>				
<b>CS09/RX1210</b>	GRX1200/GX1200	733283	GEV163	Data transfer cable, 1.8m,connects RX port to GRX1200/GX1200
<hr/>				
<b>CS10/CS15</b>  	TPS1200	756367	GEV217	Data transfer cable, 1.8m,connects CS10/15 to TPS1200
	GS15/GS10	767899	GEV234	USB data cable, 1.65 m, connects CS to GS or CS to PC (USB)
<hr/>				
<b>CS10*/CS15* CS09</b>  	GS15/GS10/GS09	772807	GEV237	USB data cable, 1.65 m, connects GS15/GS10/GS09 to CS Lemo

\* with Lemo connector module

\*\* with Mini USB connector module



# Cable

DEVICE	INSTRUMENT	ART.	SIGN	DESCRIPTION
<b>TCPS</b>	TS30	771057	GEV236	Y-cable, 1.8m, connects TS30 - TCPS - Batt
				
<b>Satellite 3AS w/o housing</b>	GS15/GS10/TPS1200	639968	GEV125	Data transfer cable, 1.8m connects Satellite radio w/o housing
				
<b>Satellite 3AS Epic pro (10W)</b>	GS09/GS10/GS15/GRX1200	762026	GEV221	Y-cable, 2m, connects Satel - GS/GX - Batterie
<b>Satellite 3AS Epic pro (35W)</b>	GS09/GS10/GS15/GRX1200	636805	GEV114	Connects Satellite to GS, for GS09 a GEV205 is additionally required
<b>System 1200 GFU</b>	GS09/GS15	748418	GEV205	Y-cable, 1.8m, connects GS09/15 - GFU - Batterie
	GS15/System500 GPS	767898	GEV233	Data cable, 0.8m GS15/System500 to GFU
	GS15/System500 GPS	767897	GEV232	Data cable, 2.8m GS15/System500 to GFU
				
<b>System500 GFU</b>	TPS1200/GS10/GS15/GRX1200	767897	GEV232	2.8m, connects System 500 GFU housings
	TPS1200/GS10/GS15/GRX1200	767898	GEV233	0.8m, connects System 500 GFU housings
<b>External Modem</b>	GRX1200/GS10/GS15	563809	GEV113	Data cable, 2.8m, connects GX port 1, 2, 3, (port 3 not for GS15) to modem
<b>Time mark receiver</b>	GX/GRX1200	667744	GEV150	PPS output cable, 2m
<b>External GNSS antenna*</b>	GRX1200/GS10	667200	GEV141	antenna cable, 1.2m
	GRX1200/GS10	667201	GEV142	antenna cable, 1.6m
	GRX1200/GS10	636959	GEV120	antenna cable, 2.8m
	GRX1200/GS10	632372	GEV119	antenna cable, 10m
	GRX1200/GS10	724969	GEV194	antenna cable, 1.8m,
				
<b>External antenna</b>	GS05/06	772002	GEV238	antenna cable, 1.2m
				

\*or external Gainflex UHF/GSM Radio ant.



## Perfect Compatibility of the Accessories

Leica Geosystems instruments and Leica Geosystems accessories are perfectly aligned to each other and constitute a finely tuned package. In order to achieve the individually required accuracy, it is always necessary to consider the accuracy of the instrument and accessory system as a whole.

### **Transparent Choice for your individual Requirements**

On the table overleaf you will find an overview of Leica Geosystems instruments and the accessories recommended for them. Please consider our recommendations when selecting your tripod, tribrach and prisms, as well as electric and electronic accessories.



The table can be simply folded out. It is then always visible as the product pages and product descriptions are reviewed, helping to make your selection easier.

# Overview

## Instruments-Accessories

TRIPODS					
TPS	1"	2"	3"	5"	7"
<b>Motorised</b>					
TPS Setup or Traversing with Forced Centering	GST20 GST20-9 GST120-9	GST20 GST20-9 GST120-9	GST20 GST20-9 GST120-9	GST101	
<b>Manual</b>					
TPS Setup or Traversing with Forced Centering	GST20 GST20-9 GST120-9	GST20 GST20-9 GST120-9	GST20 GST20-9 GST120-9	GST05 GST101	GST05 GST101
Prism Setups on Control Points	GST101	GST101	GST101	GST05 GST05L	GST05L GST103
<b>GNSS</b>	Static GST05			Kinematic GST05L	
<b>Levels</b>	DNA GST40 GST20 GST20-9 GST120-9			Automatic GST103	

TRIBRACHS					
TPS	1"	2"	3"	5"	7"
<b>Motorised</b>					
TPS Setup or Traversing with Forced Centering	GDF121 GDF122	GDF121 GDF122	GDF121 GDF122	GDF121 GDF122	
<b>Manual</b>					
TPS Setup or Traversing with Forced Centering	GDF121 GDF122	GDF121 GDF122	GDF121 GDF122	GDF111-1 GDF112	GDF101 GDF102
Prism Setups on Control Points	GDF111-1 GDF112	GDF111-1 GDF112	GDF111-1 GDF112	GDF101 GDF102	GDF101 GDF102

PRISMS				
	Model:	Centring accuracy	Prisms constant	Antireflex-coating
<b>Professional 5000</b>				
Standard-Reflectors	GPR121	1,0 mm	0	yes
	GPR1+GPH1	1,0 mm	0	yes
	GRZ4	2,0 mm	+23,1 mm	yes
Special-Reflectors	GPH1P	0,3 mm	0	no (tilted)
	GRZ122	2,0 mm	+23,1 mm	yes
Mini-Reflectors	Mini GMP101	1,0 mm	+17,5 mm	no
	GRZ101	1,5 mm	+17,5 mm	no
<b>Professional 3000</b>				
Standard-Reflectors	GPR111	2,0 mm	0	no
Special-Reflectors	GPR112	*	-7,1 mm	no
Mini-Reflectors	GMP111	2,0 mm	+30 mm	no
	GMP111-0	2,0 mm	0	no
<b>Professional 1000</b>				
Standard-Reflectors	GPR113	2,0 mm	0	no
Special-Reflectors	GMP104	*	+8,9 mm	no

\*due to flexible mounting mechanisms no centering accuracy can be specified for monitoring prisms.

Whether you want to monitor a bridge or a volcano, survey a skyscraper or a tunnel, stake out a construction site or perform control measurements – you need reliable equipment. With Leica Geosystems original accessories, you can tackle demanding tasks. Our accessories ensure that the specifications of the Leica Geosystems instruments are met. Therefore you can rely on their accuracy, quality and long life. They ensure precise and reliable measurements and that you get the most from your Leica Geosystems instrument.

**When it has to be right.**



**Total Quality Management –  
Our commitment to total  
customer satisfaction**  
Ask your local Leica Geosystems  
dealer for more information  
about our TQM program.

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

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**Surveying  
Tripods**  
White Paper



**Surveying  
Tribrachs**  
White Paper



**Surveying  
Reflectors**  
White Paper



**Batteries &  
Chargers**  
White Paper



**Storage Media  
& Card Reader**  
White Paper

Please visit <http://accessories.leica-geosystems.com>  
for detailed information and more documents.