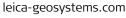
## Leica Geosystems Original Accessories

Material matters











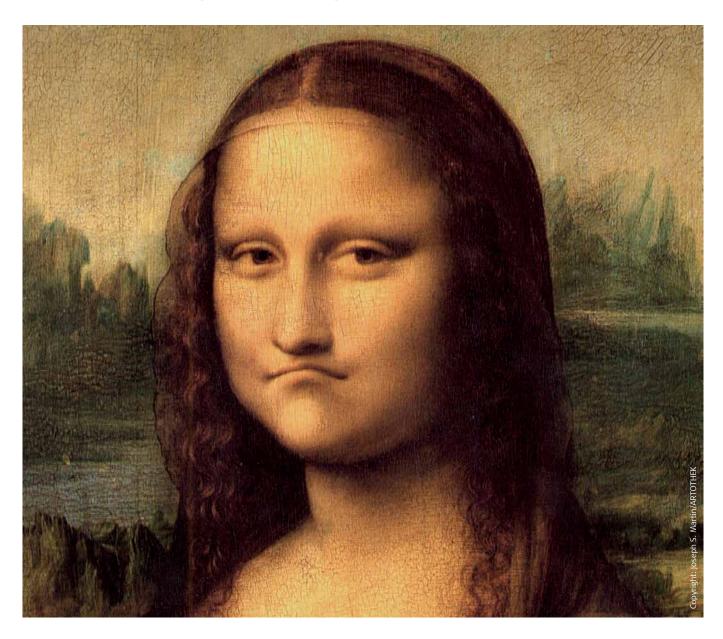






## Unhappy with copies?

## There is only one original!



Benefit from the quality, precision and reliability of Leica Geosystems Original Accessories – perfectly suited for Leica Geosystems measuring equipment. You'll recognise Original Leica Geosystems Accessories by the security label with its unique code and colour-shifting logo, found on either the packaging or additional leaflet.

The genuineness of your accessory can be verified by entering the security code at www.myworld.leica-geosystems.com/validate or by scanning the QR code.

## Verify the genuineness

## for your safety and benefit







TAGEN.

unique security codes that guarantee that what you bought is truly a part of the Leica Geosystems complete solution. No other accessories compare to those developed and produced by Leica Geosystems. Experience the optimal performance of your Leica Geosystems measuring equipment using

**Original Accessories** 

now come with

truly integrated accessories for optimised performance. If you place great importance on the accurate results and quality of your deliverables, make sure you know you are using the original. By validating your accessory security code, you will be 100% sure you bought Leica Geosystems Original Accessories. And the excellent results you receive will convince you there is no substitution for the very best.



## 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 realisation 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. It is from this standpoint that Leica Geosystems builds accessories that have been meticulously aligned to the instruments. Every detail counts, when visions are to become reality.



COMSA EMTE offers comprehensive services in railway infrastructures and has gained worldwide reputation. Jesús Gimeno Samperiz, survey project manager of the technical department at COMSA EMTE: "In our working environment

we use high-end surveying equipment. We would never compromise on quality. In order to achieve maximum performance of our measurement equipment, we are absolutely convinced that only the quality of original accessories can provide the required accuracy and reliability."



Mario Studer is manager of engineering surveying at BSF Swissphoto, a company of the internationally active Swissphoto Group. The thirty experts work in large projects such as airport, railway and tunnel measurements, deformation measurements

and naturally construction measurements. Mario Studer is convinced: "A very good measurement quality with precision instruments can only be achieved when the accessories fulfil the same quality criteria."













## 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 90 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 recognised 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

- 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 6/7), 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







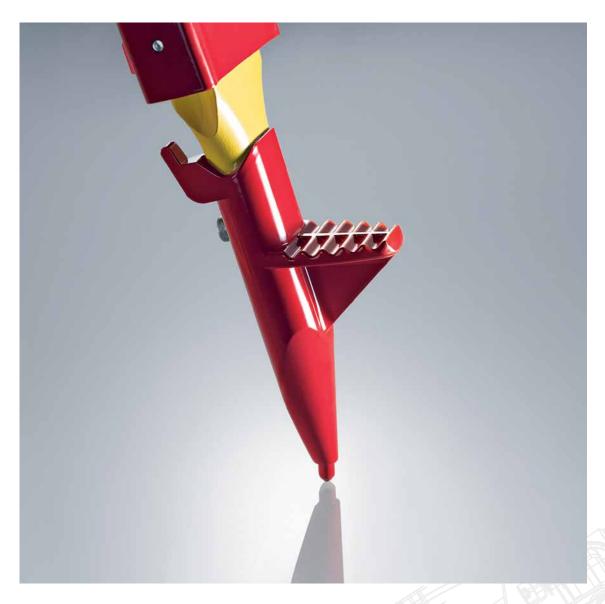




Quality always remains quality. But not every user needs extremely low measurement tolerances or works under extraordinary climatic conditions. That is why Leica Geosystems offers its original accessories in three series for differing requirements. There is a lower limit, through which quality is defined.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

	PROFESSIONAL 5000	PROFESSIONAL 3000	PROFESSIONAL 1000	
Price/ performance	The Professional 5000 Series meets the highest demands for precision, reliability, longevity and service.	The Professional 3000 Series meets high standards in exactness, function, consistency and service.	The Professional 1000 Series reliably fulfils all requirements of the most common surveying tasks.	
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 10mm 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 LS15 digital level.

#### 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.

#### PROFFSSIONAL 1000



TRIPOD UNIVERSAL

- The Professional 1000 Series consists of heavy and light tripods for demanding application conditions.
- The GST101 heavy wooden tripod is made from birch and proves itself for precise backsights 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 birch 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



GDF321 GDF322

- The hysteresis of the Professional 5000 Series tribrachs is guaranteed to a maximum of 1" (0.3 mgon) or better.
- The foot screws are maintenancefree 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



GDF311 GDF312

- The hysteresis of the Professional 3000 Series tribrachs amounts to a maximum of 3" (1.0 mgon).
- The foot screws are maintenancefree 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.

#### PROFFSSIONAL 1000



GDF301 GDF302

- The hysteresis of the Professional 1000 Series tribrachs amounts to a maximum of 5" (1.5 mgon).
- The GDF101 and GDF102 are cost effective tribrachs which prove themselves 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 top plate to the base plate of  $0.3\,\mu m$  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 the copper coating, 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 1 mm 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 to provide highest longevity as well as to minimise 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 anticondensation 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.

PROFESSIONAL 1000



COST EFFECTIVE MEASURING

Despite its attractive costperformance ration, the Professional 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.

#### Lifetime

In contrast to many conventional prisms, the reflective copper coating on the reverse side of original prisms consists of an 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.

## 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 recognised 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 to +70 °C and functions reliably at operating temperatures from - 20 to +55°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 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 range 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 intelligent charging bay concept all Li-lon batteries are fully backwards compatible.
- Charge up to 4 batteries 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.

#### PROFESSIONAL 1000



SIMPLE CHAR-

Can be directly plugged into CS 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
- IP54 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 Contents

Tripods	20
Tribrachs	22
Carriers	23
Standard reflectors	24
Special reflectors	25
Mini reflectors	26
Containers & bags	27
Reflector poles	30
GNSS poles	31
Accessories for reflector poles	32
LS/DNA levelling staffs	34
Data storage	35
Radio accessories	36
Eyepieces	38
Chargers	39
Batteries	40
Cables	42

## **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: 296632



#### GST20-9, Wooden tripod

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

Order No: 394752



#### 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: 667301



#### 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 (13.2 lb).

#### PROFESSIONAL 3000



#### GST05, Wooden tripod

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

Order No: 399244



#### 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 107 cm (3.51 ft), extendible to 176 cm (5.77 ft), weight 4.6 kg (10.1 lb).

Order No: 563630

#### PROFFSSIONAL 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 starting from 5" and reflectors. Packaged length 104cm (3.41ft), extendible to 166cm (5.45ft), weight 5.7kg (12.6lb).

Order No: 726831



#### GST103, Aluminium tripod

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

Order No: 726833

#### **ACCESSORIES FOR TRIPODS**



GST4, Tripod star
For the secure set-up of tripods
on slippery surfaces.

Order No: 332200



**GHT43, Tripod bracket**Adapter for mounting the TCPS radios on all tripods.

Order No: 734163



GHT58, Tripod bracket Adapter for mounting the GFU radios on all tripods.

### **Tribrachs**

#### PROFESSIONAL 5000



#### GDF321, Tribrach without plummet

High accuracy, maintenance free tribrach. Individually tested. Suitable for all high angular accuracy requirements.

Torsional stiffness <1", weight 760 grams (1.72 lb).

Order No: 777508



### GDF322, 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 850 grams (1.90 lb).

Order No: 777509

#### PROFESSIONAL 3000



#### GDF311, 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 800 grams (1.76lb).

Order No: 842061

#### PROFESSIONAL 1000



#### GDF301, 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 800 grams (1.76 lb).

Order No: 842063



## GDF312, 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 GDF312 ideal for GNSS and backsights and control points.

Torsional stiffness <3", weight 885 grams (1.95 lb).

Order No: 842062



## GDF302, Tribrach with optical plummet

A cost effective tribrach with optical plummet for use in normal environments. Suitable for GNSS antennas.

Torsional stiffness < 5", weight 885 grams (1.95 lb).

Order No: 842064

#### **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: 667718



### GHT196, Holder for height meter

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

### **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 0.3 mm, plummet accuracy 1.0 mm at 1.5 m.

Order No: 667316

#### PROFESSIONAL 3000



GRT144, Carrier with stub

Simple carrier for use in tribrachs with optical plummet. Suitable for reflectors with stub fitting.
Reflector centring accuracy 1.0 mm.

Order No: 667313



GRT146, Carrier with 5/8" thread

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

Order No: 667216



GZR3, Precision carrier with optical plummet

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

Order No: 428340



GZR103, Carrier with optical plummet

Rotatable carrier with longitudinal bubble for use in tribrachs without plummet.

Reflector centring accuracy 1.0 mm, plummet accuracy 0.5 mm at 1.5 m.

Order No: 725566



GRT247, Carrier with 5/8" thread for GS15

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

Order No: 770715

#### **ACCESSORIES FOR CARRIERS**



GAD31, Screw-to-stub adapter

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

Order No: 667217



#### GZS4, Height hook

Hook to precisely measure the height of GNSS antennas and reflectors. Connects to all Leica Geosystems carriers. With integrated tape measure in mm and inches.

### Standard reflectors

#### PROFESSIONAL 5000



GPR121, Circular prism with holder

Precision circular prism with antireflex coating, mounted in metal holder. Supplied with removable target plate. Centring accuracy 1.0 mm, range 3,500 m (11,500ft).

Order No: 641617

#### PROFESSIONAL 3000



GPR111, Circular prism with holder

Circular prism, sealed in red polymer holder. Large integrated target plate provides good visibility.

Centring accuracy 2.0 mm, range 2,500 m (8,200ft).

Order No: 641618

#### 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 2.0 mm, range 2,500 m (8,200ft).

Order No: 753492



GPR1, Circular prism

Precision circular prism with antireflex coating. Suitable for mounting in GPH1 and GPH3 holders. Centring accuracy 1.0 mm, range 3,500 m (11,500ft).

Order No: 362830



GRZ4, 360° prism

Suitable for all robotic TPS work performed with a survey pole. Overall 3D pointing accuracy of 5.0 mm. When aiming on a side marked by a yellow arrow, an accuracy of better than 2.0 mm can be achieved. ATR range of 600 m (2,000 ft).

Order No: 639985

#### 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: 362820



GPH3, Prism holder

Holder for three GPR1 circular prisms. Provides extremely long distance measuring range, up to 5,400 m (17,700 ft) with prism mode.

Order No: 400080



GZT4, Target plate for GPH1

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

## Special reflectors

#### PROFESSIONAL 5000



#### **GPH1P**, Precision prism

Precisely machined reflector, for high accuracy requirements. The prism diopter is slightly tilted to prevent any EDM reflection from the front surface, thereby increasing measurement accuracy. Centring accuracy 0.3 mm, range 3,500 m (11,500 ft). Order No: 555631



#### 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 78 mm. Overall 3D pointing accuracy is 2.0 mm. ATR range of 600 m (2,000ft).

Order No: 754384

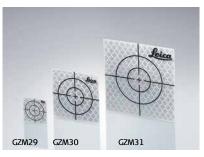
#### PROFESSIONAL 3000



#### **GPR112**, Monitoring prism

Large diameter monitoring prism for long range measurements. For installation on M8 or 5/8" threaded bolts. Built-in filter prevents condensation on the backside of the prism. Rain/snow cover available separately, range 2,500 m (8,200ft).

Order No: 726295



#### GZM29/30/31, Reflective tapes

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

GZM29, 20x20 mm, for measurements up to 100 m (330 ft). Order No: 763532 GZM30, 40x40 mm, for measurements up to 200 m (650 ft). Order No: 763533 GZM31, 60x60 mm, for measurements up to 250 m (820 ft). Order No: 763534

#### PROFESSIONAL 1000



#### GMP104, Monitoring mini prism

Mini monitoring prism with anti-reflex coating mounted in metal holder. Supplied with L-bar for fixed installations. The prism offset is dependant on the mounting position, range 2,000 m (6,600 ft).

Order No: 641762



#### GPR105, Double sided reflector

This unique reflector provides two back-to-back prisms, both with 0-constant. With 1/4" fitting, suitable for mounting on GLS105/115 reflector poles or GAD105, range 250 m (820 ft).

Order No: 731346

#### **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: 726296



#### GDZ112, Rain shelter for GPR112

Rain shelter for monitoring prism GPR112. Full availability of the prism even in rainy and snowy conditions. The rain shelter protects the prism front against rain drops, snow and dust.

### 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 +17.5 mm, centring accuracy 1.0 mm, range 2,000 m (6,600 ft). Order No: 641662



#### GRZ101, 360° mini prism

Suitable for short range prism applications. Due to its small size, the GRZ101 provides the greatest pointing accuracy of 1.5 mm. With the GAD103 adapter, this reflector can be mounted on all poles with stub fitting. ATR range of 350 m (1,150 ft).

Order No: 644327

#### 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 +17.5 mm, range 2,000 m (6,600 ft).

Order No: 641615



#### 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 2,000 m (6,600 ft).

Order No: 642534

#### **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: 742006



#### GAD105, Mini prism adapter

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

Order No: 743503



#### GMP112, Hidden point pole

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

Order No: 742329



#### GVP608, Soft bag

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

## Containers & bags

#### HARD-TOP CASES



#### **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: 667451

#### GVP722, Container for SmartPole and SmartStation

Hard container for SmartAntenna, CS field controller/tablet and accessories for a SmartPole and SmartStation setup.

Order No: 817055

#### **GVP734, GNSS Rover Container**

Small-sized hard container for SmartAntenna, CS10, CS15, CS20 field controller and accessories for a rover setup.

Order No: 855306

### GVP723, Container for GS10/25 base

Hard container for GS10/GS25 receiver, CS field controller/tablet and accessories for a base or rover

Order No: 817056

### GVP724, Container for TS robotic setups

Small-sized hard container for 360° prism and CS field controller for TS robotic setup.

Order No: 817057

#### GVP735 GNSS Base+Rover

Hard container for 2 SmartAntennas, CS field controller and accessories for a base and rover setup.

## Containers & bags

#### BACKPACKS, BAGS



GVP643, Soft bag for CS10 field controller

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

Order No: 767904



GVP703, Soft bag

Padded bag for accessories, controller, radios or CS25 tablet.

Order No: 790314



GVP102, Soft bag for prism station

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

prisiii

Order No: 727589



GVP644, Soft bag for CS15 field controller

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

Order No: 767905



GVP647, Minipack for GNSS receiver

Minipack, for GS10 receiver, allows carrying GNSS Receiver and RTK Devices in a most ergonomic way on

the back.

#### **ACCESSORIES FOR CONTAINERS**



GVP716, Backpack carrying system Easy-to-mount backpack system for carrying all large TPS and GNSS container including TS/MS60 containers.

Order No: 833516



GVP717, Sidebag for containers
Can be mounted to
GVP721/722/723/725 containers.
To hold additional accessories, CS35
tablet, laptop or documents.

Order No: 833517



GVP719, Shoulder strap
For carrying short distances. Fits to
GVP721/722/723/725 containers.
Order No: 833519



**GVP718, Basic carrying system** Fits to GVP721/722/723/725 containers.

Order No: 833518



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.

## TPS poles

#### PROFESSIONAL 5000



#### GLS12, Telescopic pole

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

Order No: 754391

#### GLS12F, Telescopic pole

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

Order No: 754389



#### GLS14, Mini pole

Mini reflector pole for exact positioning of the reflector over a survey mark. Provides a prism height of 20 cm (0.66 ft). Order No: 403427

#### PROFESSIONAL 3000



#### GLS11, Telescopic pole

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

Order No: 385500

#### 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 1.40 m (4.59 ft), extendible to 2.60 m (8.53 ft), weight 1.48 kg (3.26 lb).

Order No: 667309

#### 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 (4.82 ft), extendible to 3.60m (11.81 ft), weight 1.88 kg (4.14 lb).

Order No: 667310

#### PROFESSIONAL 1000



#### GLS101, Telescopic pole

Carbon / aluminium reflector pole with twist lock and pin lock to prevent any pole slip. Graduated in cm and ft. min length 1.31m, extendible to 2.3m, weight 1.230 g.

Order No: 865472



#### 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 130 cm. For prisms without bubble a additional clip on bubble is available (GLI115, 747895).

## **GNSS** poles

#### PROFESSIONAL 5000



### GLS30, Telescopic carbon fibre GNSS pole

Carbon fibre pole with snap lock at 2.00 m (6.56 ft) and 1.80 m (5.91 ft) for rapid setup. Min. length 1.36 m (4.46 ft), light weight at 700 g (1.55 lb).

Order No: 752292

#### GLS31, Telescopic carbon fibre SmartPole

Carbon fibre pole with snap lock at 2.00 m, 1.80 m and 1.50 m for GRZ122 360° prism and GNSS antenna. Min. length 1.36 m (4.46 ft), light weight at 700 g (1.55 lb). Order No: 766359

#### PROFESSIONAL 3000



#### GLS12, Telescopic aluminium SmartPole

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

Order No: 754391

### GLS13, Telescopic aluminium GNSS pole

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

Order No: 768226

#### PROFESSIONAL 1000



#### GLS102, Telescopic GNSS pole

Carbon / aluminium reflector pole with twist lock and pin lock to prevent any pole slip. Graduated in cm and ft. min length 1.39m, extendible to 2.3m, weight 1.290 g.

Order No: 865473

#### **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.

## Accessories for TPS poles

#### ACCESSORIES FOR TPS POLES AND GNSS POLES



GHT63, Poleclamp for field controller holder

Poleclamp to attach a holder GHT62, GHT66 or GHT78 to every telescopic

Order No: 767880



GHT36, Base for telescopic rod on tripod

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

Order No: 667236



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: 767896



GHT62, Holder for CS10/15 field controller

Adjustable holder for CS10/CS15 field

Order No: 767879



GHT66, Holder for CS20 field controller

Adjustable holder for CS20 field controller.

Order No: 807157



GHT78, Holder for CS35 tablet

Adjustable holder for CS35 tablet.

Order No: 832127



GHT70, Tripod holder for CS field controllers

For attaching a CS10, CS15, CS20 or CS35 field controller with its designated holder to a tripod.

Order No: 845832



GAD124 Topo Shoe for GLS30/31

Pin with screwable plate for attaching to a GLS30/31 for using on soft

ground.

#### ACCESSORIES FOR TPS POLES AND GNSS POLES



GSR2, Dual strut support With 2 telescopic legs, for rapid setup of  $\varnothing$  25 mm poles.

Order No: 555720



GSR111, Dual strut support
With 2 telescopic legs, for rapid setup. Suitable for poles of all
diameters.

Order No: 667319



**GZW12, TPS pole extension**Extends all poles with stub fitting, by 1.00 m (3.28 ft).

Order No: 403428

#### GLS18, GNSS pole extension

Extends all poles with 5/8" thread by 1.00 m (3.28 ft).

Order No: 667222



**GST6**, Quickstand

With 3 telescopic legs, provides an extremely stable support for  $\varnothing$  25 mm poles.

Order No: 560138

#### 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 UHF/GSM antenna fits on arm.

Order No: 767790



GAD33, Arm 15 cm for UHF/GSM antenna

Arm 15 cm long, attaches to GNSS antenna. Gainflex UHF/GSM antenna fits on arm. Antenna cable connects to arm.

Order No: 667219



#### GAD34, Arm 3 cm for UHF/GSM antenna

Arm 3 cm long, screws on telescopic rod with 5/8" screw. UHF/GSM antenna fits on arm. Antenna cable connects to arm.

Order No: 667220

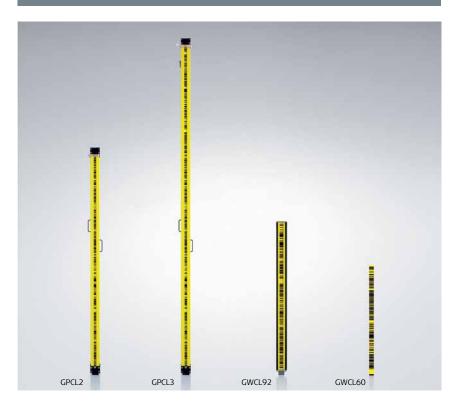


GAD46, Double arm for UHF/GSM antennas Double arm adapter, screws on

telescopic rod. Allows to connect up to 2 UHF/GSM antennas and up to 2 antenna cables on arm.

## LS/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 2.0 m (5.56 ft), weight 4.2 kg (9.3 lb). Order No: 563659

#### GPCL3, Invar staff with bar code

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

Order No: 560271

#### GPCL3, Invar staff with certificate

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

Order No: 560274

### GWCL92, Invar staff with bar code for industrial applications

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

Order No: 632313

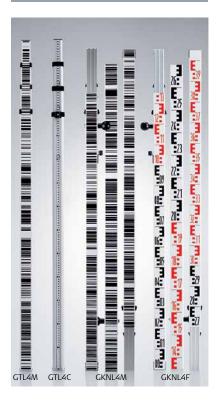
#### GWCL60, Invar scale with bar code

Invar scale with screw holes allow for attachment directly to structures. Ideal for long-term height monitoring applications.

Dimensions of  $600 \times 25 \times 1.5$  mm, for measuring range of 1.8 - 20 m (6 - 65 ft).

Order No: 563733

#### PROFESSIONAL 3000



#### GTL4M, Telescopic fibreglass staff

Four-section telescopic staff. Dual measuring faces with bar code and mm graduations. Incl. transport bag. Length 1.2 m (3.94ft) to 4.0 m (13.12ft), weight 2,2 kg (4.9 lb), coefficient of expansion 10 ppm/°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 1.2 m (3.94ft) to 4.0 m (13.12ft), weight 1.8 kg (4.0 lb), coefficient of expansion 24 ppm/°C. Order No: 667113

#### GKNL4M, Sectioned fibreglass staff

3 connectable sections. Dual measuring faces with bar code and cm graduations. With 2 handles and transport bag. Length 1.6 m to 4.0 m, weight 4.4 kg, coefficient of expansion 10 ppm/°C.

Order No: 522794

#### 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 10 ppm/°C. Order No: 522793

## Data storage

#### MEMORY CARDS AND CARD READERS



#### MSD1000, Industrial grade SD memory card 1 GB

Secure digital memory card. capacity 1GB. These rugged industrial grade cards protect data even when dropped and in extreme environmental conditions.

Order No: 767856



#### MCF256, Industrial grade CompactFlash card 256 MB

CompactFlash memory card. Capacity 256 MB. These rugged industrial grade cards protect data even when dropped and in extreme environmental conditions.

Order No: 733257



#### MS1, Industrial grade USB memory stick 1GB

Rugged USB stick in metal housing. industrial grade with highest data security and reliability at extreme environmental conditions.

Order No: 765199



#### MSD08, Industrial grade SD memory card 8GB

Secure digital memory card. Capacity 8GB. These rugged industrial grade cards protect data even when dropped and in extreme environmental conditions.

Order No: 789139



#### MCF1000, Industrial grade CompactFlash card 1GB

CompactFlash memory card. Capacity 1GB. These rugged industrial grade cards protect data even when dropped and in extreme environmental conditions.

Order No: 745995



#### 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: 776240



#### MSD, Industrial grade Micro SD memory card 1GB

Micro secure digital card. Capacity 1GB. These rugged industrial grade cards protect data even when dropped and in extreme environmental conditions.

Order No: 795993



#### MCFAD1, CompactFlash card adapter

Adapts a CompactFlash card to PCMCIA size. Allows use of the 32MB CompactFlash card in DNA, GPS500 and TPS1100 instruments.

Order No: 733258



#### MCR7, USB card reader for SD and CF

Omnidrive card reader for SD and CF cards. Guaranteed secure data transfers with USB connection to all PC operating systems.

### Radio accessories

#### **ACCESSORIES FOR HPR RADIOS**



GST74, Antenna mast including tripod

Aluminium tripod with a telescopic mast to extend the antenna height up to 5 m (16.5 ft). Includes a bag and suspension ropes with hooks.

Order No: 806098



GVP712, Container for HPR high power radio

Small black waterproof container. Holds a HPR radio and cables.

Order No: 806097



GVP711, Soft bag for battery

Soft bag which can hold a battery. Includes a cable kit with 2 SAE connectors to connect to GEV272 or GEV274 power cable.

Order No: 806096



GAD117, Adapter antenna to mast

Adapter for mounting the GAT23 or GAT24 antenna to the top of GST74. Includes 5 m (16.5 ft) cable.

Order No: 806101



GAT23, UHF antenna 430-450 Mhz

UHF whip antenna for 430-450MHz frequency range, 5 db gain.

Order No: 806099



GAT24, UHF antenna 450-470 Mhz

UHF whip antenna for 450-470 MHz frequency range, 5 db gain.

#### ACCESSORIES FOR LEICA FIELD CONTROLLER AND TOTALSTATION



GDZ71, Stylus Stylus for CS20 field controller. Order No: 813914

GHT76, Tether

Tether to clip on a GDZ71. Order No: 813582



GHT68, Utility hook for CS20 field controller

Utility hook for attaching CS20 field controller to a tripod.

Order No: 807245



GHT67, Hand strap for CS20 field controller

Hand strap for CS20 field controller.

Order No: 807158



GDZ76, Digitiser pen Digitiser pen for CS35 tablet.

Order No: 851539



**GHT77**, Tether

Tether for a GDZ76. Order No: 832122



GHT79, Hand strap

Hand strap for CS35 tablet.

Order No: 833343



CCS01, Docking station for CS10/CS15 field controller

For easy charging and data transfer to PC. CS10/CS15 field controller with attached holder can be placed into the docking station. Includes USB data transfer cable.

Order No: 767906



GHT61, Hand strap for CS10/CS15 field controller

Hand strap for field controller with utility hook for attaching to a belt

or tripod.

Order No: 767877



SPF01, Screen protection foil

for CS10/CS15 Order No: 767907

SPF03, Screen protection foil for TPS1200, TS12, TS30, TM30

Order No: 799658

SPF04, Screen protection foil

TS03, TS07, TS09+, TS11, TS12L, TS15, CS10, CS15, LS10/15, ICR60, ICB60,

Builder 100-500 Order No: 799660

#### SPF05, Screen protection foil

for CS20, TS10, TS13,

TS16, TS60, MS60, ICR80, ICB 50/70

Order No: 813781

SPF06, Screen protection foil

for CS35

Order No: 832126

Each set contains 2 foils and a micro fibre cleaning cloth

(except SPF06).

## Eyepieces

#### DIAGONAL EYEPIECES AND ANCILLARY LENSES



GFZ4T, Diagonal eyepiece

For comfortable observations of steep sights, up to the zenith. With thread connection. Fits only for Flexline plus TS02+. No counterweight needed.

Order No: 793978



GFZ3, Diagonal eyepiece

For comfortable observations of steep sights, up to the zenith. Fits all TPS instruments except TS02+. Includes objective counterweight.

Order No: 793979



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 except TS02+. Includes objective counterweight.

Order No: 376236



GVO13, Solar filter

Attaches to the objective of all TPS instruments. Protects eyesight and EDM electronics when sighting bright objects.

Order No: 743504



GOA2, Autocollimation eyepiece

To perform autocollimation with any TPS instrument except TS02+. The 394787 GEB62 plug-in lamp and 394792 GEB63 battery box are additionally required.

Order No: 199899



FOK53, Magnification eyepiece

Exchangable eyepiece for increasing telescope magnification to 42 x (Requires fitting by a Leica Geosystems Service Centre).

Order No: 377802



GSK1, Set cover for eyepiece and lens

Fits all TPS instruments.

Order No: 799220

## Chargers

#### PROFESSIONAL 5000



#### **GKL341**, Charging station

Intelligent charging ensures long battery life. Possible to charge up to 4 batteries simultaneously.

GEB211/212/221/222/241/242/331.

Includes country specific mains connection.

Order No: 799187



#### GDC221, Car adapter cable

For connecting the GKL341 to a 12V – 24V power source, at the cigarette lighter socket. Built-in electronics protect the charger from power surges.

Order No: 734389

#### PROFESSIONAL 3000



#### GKL311, Battery charger

Easy-to-use, low cost charger for GEB211/212/221/222/241/242/331 Li-lon batteries. Includes car adapter cable.

Order No: 799185



#### GKL112, Battery charger

Simple, low-cost charger for GEB121 and GEB111 NiMh batteries. Includes car adapter cable.

Order No: 734753



GKL32, Battery charger

Charges one GEB171 or batteries with 5-pin charging socket.

Order No: 785703



GEV242, Battery charger

Charges one GEB371 battery.

Order No: 774437

GKL235, Charger

Charger for CS35 battery GEB235/236.

Order No: 832118

#### PROFESSIONAL 1000



AC/DC adapters for field controller

AC/DC-adapter, power supply for Field Controller.

GEV235, AC/DC adapter EU for CS10/CS15 field controller

Order No: 767900

GEV235-1, AC/DC adapter US for CS10/CS15 field controller

Order No: 773753

GEV235-2, AC/DC adapter JP for CS10/CS15 field controller

Order No: 773754

GEV235-3, AC/DC adapter UK for CS10/CS15 field controller

Order No: 773755

GEV235-4, AC/DC adapter AUS for CS10/CS15 field controller

Order No: 773756

GEV276, AC/DC adapter for CS20 field controller

Order No: 822787

GEV280-1, AC/DC adapter EU

for CS35 tablet Order No: 832113

GEV280-2, AC/DC adapter UK

for CS35 tablet

Order No: 832114

GEV280-3, AC/DC adapter US for CS35 tablet

Order No: 832115

GEV280-4, AC/DC adapter AUS

for CS35 tablet Order No: 832116

GEV280-5, AC/DC adapter CH

for CS35 tablet

### **Batteries**

#### **INTERNAL BATTERIES**



**GEB242, Li-Ion battery**High output battery for TS60/MS60 and TM50 instruments, 14.8V/5.8Ah.

Order No: 793975



GEB222, Li-Ion battery

High output battery with extended capacity for all TS11/12/15/16 and Flexline instruments, GS10 GNSS receiver and Piper 100/200, 7.4V/6.0Ah.

Order No: 793973



GEB221, Li-Ion battery

High output battery for all TS02/06/09/11/12/15/16, GS10 GNSS receiver and Piper 100/200, 7.4V/4.4Ah.

Order No: 733270



GEB212, Li-Ion battery

High output battery with extended capacity for CS10/CS15 field controllers and GNSS receivers, 7.4V/2.6Ah.

Order No: 772806



GEB361, Li-Ion battery

High output battery for RTC and TS03/07/10 Flexline instruments, 11.1V/5.6Ah.

Order No: 799191



GEB331, Li-Ion battery

High output battery for CS20 field controller. 11.1V/2.8Ah.

Order No: 799190



GEB235, Li-Ion battery

Battery for CS35 tablet, 10.8V/4.4Ah.

Order No: 832119



GEB236, Li-Ion battery

High output battery for CS35 tablet, 10.8V/9.3Ah.

Order No: 832120



GEB121, NiMH battery

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

Order No: 667123



GEB111, NiMH battery

Low maintenance battery for TPS400/800 and DNA instruments,

6.0V/2.1Ah.
Order No: 667318

#### **EXTERNAL POWER SUPPLY**



#### GEB371, External Li-Ion battery

High output battery for set-ups over long periods, 13 V/250 Wh. Requires GEV242 for charging. With a GEV277 cable the battery can be used as UPS (uninterruptible power supply). Weight 2.3kg.

Order No: 818916



#### **GEV270**, Power supply

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

Order No: 807696



#### **GEV71**, Power cable

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

## Cables

DEL.//CE	INICTOLIMENT	ADT	CICNI	DESCRIPTION
DEVICE	INSTRUMENT	ART.	SIGN	DESCRIPTION
GEB371 or GEV270	TS02/06/09/11/12/15/16, LS GS10/25 TM50/TS/MS60, Any GS, CS10*/15*/20 GS10/25, GR10/25 CS10/15/20, GS08plus/12/14/15 GS08plus/12/15 GS14 TM50/TS/MS60	733298 756365 748418	GEV219 GEV172 GEV215 GEV205 GEV264	Power cable, 1.8m, connects instrument to external battery Power cable, 1.8m, connects instrument to external battery Power cable, 1.8m, connects instrument to external battery Y-cable, 2.8m, connects instrument with two external power supplies Y-cable, 2.0m, connects instrument to external battery Y-cable, 1.8m, connects instrument to external battery Y-cable, 1.8m, connects instrument to GFU and battery Y-cable, 1.8m, connects instrument to PC and battery
12V car battery	All instruments	439038	GEV71	Car battery cable, 4m, connects all power cables to 12V car battery
PC-RS232 port	TS02/06/09/11/12/15/16, LS TS02/06/09/11/12/15/16, DNA GS10/15/25, GR10/25 TM50/TS/MS60, GS10/15, CS10*/15*/20 GFU	734698 733280	GEV162	Data cable, 2m, connects instrument to PC (RS232) Y-cable, 2m, connects instrument to PC and battery Data cable, 2.8m, connects instrument port 2 to PC (RS232) Data cable, 2.8m, connects instrument to PC (RS232) Y-program cable, 1.8m, for the Satelline radio modem inside the GFU housing
	SLR TM50/TS/MS60, GS10/15 TM50/TS/MS60, Any GS		GEV231 GEV220 GEV261	Program adapter cable, 1.8m, for SLR radios Y-cable, 1.8m, connects instrument to RS232 and battery Y-cable, 1.8m, connects instrument to PC and battery
PC-USB port	TS02/06/09/11/12/15/16, LS GS10/15/25, GR10/25 TM50/TS/MS60, GS10/14/15, CS10/15/20/2 Any GS, CS10/15/20 TS02/06/09, CS10**/15**, GS25 TM50/TS/MS60, GS10/14/15	767899 764700	GEV267 GEV268 GEV269 GEV234 GEV223 GEV261	Serial data transfer cable, 2 m, TS/TPS/LS LEMO® to USB Serial data transfer cable, 2 m, connects instrument port 2 to PC Serial data transfer cable, 2 m, connects instrument to USB USB data cable, 1.65 m, connects CS to GS or CS to PC (USB) USB data cable, 1.8 m, connects instrument with Mini-USB to USB Y-cable, 1.8 m, connects instrument to PC and battery
C510/15/20	TS12/15/16 Any GS TM50/TS/MS60, Any GS	767899	GEV217 GEV234 GEV237	Data transfer cable, 1.8 m, connects CS10/15/20 to TS12/15/16 USB data cable, 1.65 m, connects CS to GS or CS to PC (USB) USB data cable, 1.65 m, connects instrument to CS10*/15*/20
External antenna	GS05/06, CGR10/15	772002	GEV238	Antenna cable, 1.2 m
	* with LEMO® connector module ** with DSUB/Mini USB connector module			

## **Cables**

DEVICE	INSTRUMENT	ART.	SIGN	DESCRIPTION
TCPS	TM50/TS/MS60 TS11/12/15/16	771057 734697	GEV236 GEV186	Y-cable, 1.8m, connects instrument to TCPS and battery Y-cable, 1.8m, connects instrument to TCPS and battery
Satelline 3AS w/o housing	GS10/15/25	639968	GEV125	Data transfer cable, 1.8 m, connects Satelline radio w/o housing
Satelline 3AS HPR (35W)	GS10/14/15, GR10/25 GS10/14/15, GR10/25 GVP711 PC RS232	811818	GEV275 GEV274 GEV272 GEV273	Connects Satelline to instrument, for GS08plus a GEV205 is additionally required Y-cable, 2.8 m, connects Satelline to instrument and SAE adapter Cable for power connection with SAE adapter to GVP711 battery bag Programming cable RS232
GFU modem	GS15 GS15 GS15 GS14			Y-cable, 1.8 m, connects instrument to GFU and battery Data cable, 0.8 m, connects instrument to GFU Data cable, 2.8 m, connects instrument to GFU Y-cable, 1.8 m, connects instrument to GFU and battery
External modem	GS10/15/25, GR10/25	563809	GEV113	Data cable, 2.8 m, connects instrument port 2 to modem
PPS/Event	GS25/GR25 GS25/GR25 GS25/GR25	667744 403448 789061		PPS output cable, 2m PPS event in, 2m Event cable with LEMO® connector
External GNSS antenna*	GS/GR GS/GR GS/GR GS/GR GS/GR	724969 636959	GEV141 GEV194 GEV120 GEV119 GEV142	Antenna cable, 1.2 m Antenna cable, 1.8 m Antenna cable, 2.8 m Antenna cable, 10 m Extension antenna cable, 1.6 m

 $<sup>\</sup>mbox{\ensuremath{\star}}$  or external Gainflex UHF/GSM radio ant.

## Accessories overview

TRIPODS					
TPS	1"	2"	3"	5"	7"
Motorised					
TPS setup or traversing with forced centring	GST20 GST20-9 GST120-9	GST20 GST20-9 GST120-9	GST20 GST20-9 GST120-9	GST101	
TPS setup or traversing with forced centring	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
GNSS	Static GST05			Kinematic GST05L	
Levels	LS GST40 GST20 GST20-9 GST120-9			Automatic GST103	
TRIBRACHS	1				
TPS	1"	2"	3"	5"	7"
Motorised TPS setup or traversing with forced centring	GDF321 GDF322	GDF321 GDF322	GDF321 GDF322	GDF321 GDF322	
Manual TPS setup or traversing with forced centring	GDF321 GDF322	GDF321 GDF322	GDF321 GDF322	GDF311 GDF312	GDF301 GDF302
Prism setups on control points	GDF311 GDF312	GDF311 GDF312	GDF311 GDF312	GDF301 GDF302	GDF301 GDF302
PRISMS					
	Model	Centring accuracy	Prisms constant	Anti-reflex coating	
Professional 5000 Standard reflectors	GPR121 GPR1+GPH1 GRZ4	1.0 mm 1.0 mm 2.0 mm	0 0 +23.1 mm	yes yes yes	
Special reflectors	GPH1P GRZ122	0.3 mm 2.0 mm	0 +23.1 mm	no (tilted) yes	
Mini reflectors	GMP101 GRZ101	1.0 mm 1.5 mm	+17.5 mm +30 mm	no no	
Professional 3000 Standard reflectors	GPR111	2.0 mm	0	no	

2.0 mm

2.0 mm

2.0 mm

-7.1 mm

+17.5 mm

+8.9mm

0

no

no

no

no

yes

Special reflectors

Professional 1000

Special reflectors

Standard reflectors GPR113

Mini reflectors

GPR112

GMP111

GMP104

GMP111-0

<sup>\*</sup> Due to flexible mounting mechanisms no centring accuracy can be specified for monitoring prisms.



## 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.

#### Leica Geosystems - when it has to be right

Revolutionising the world of measurement and survey for nearly 200 years, Leica Geosystems is the industry leader in measurement and information technologies. We create complete solutions for professionals across the planet. Known for innovative product and solution development, professionals in a diverse mix of industries, such as surveying and engineering, building and heavy construction, safety and security, and power and plant trust Leica Geosystems for all their geospatial needs. With precise and accurate instruments, sophisticated software, and trusted services, Leica Geosystems delivers value every day to those shaping the future of our world.

Leica Geosystems is part of Hexagon (Nasdaq Stockholm: HEXA B; hexagon.com), a leading global provider of information technology solutions that drive productivity and quality across geospatial and industrial landscapes.



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

The **Bluetooth®** word mark and logos are owned by Bluetooth SIG, Inc. and any use of such marks by Leica Geosystems AG is under license. Other trademarks and trade names are those of their respective owners.

Copyright Leica Geosystems AG, 9435 Heerbrugg, Switzerland. All rights reserved. Printed in Switzerland - 2017. Leica Geosystems AG is part of Hexagon AB. 782501en - 08.19



Surveying Tripods White Paper



Surveying Tribrachs White Paper



Surveying Reflectors White Paper



Batteries & Chargers White Paper



Storage Media & Card Reader White Paper

Detailed information about original Leica accessories and more documents can be found at https://leica-geosystems.com/products/total-stations/accessories

