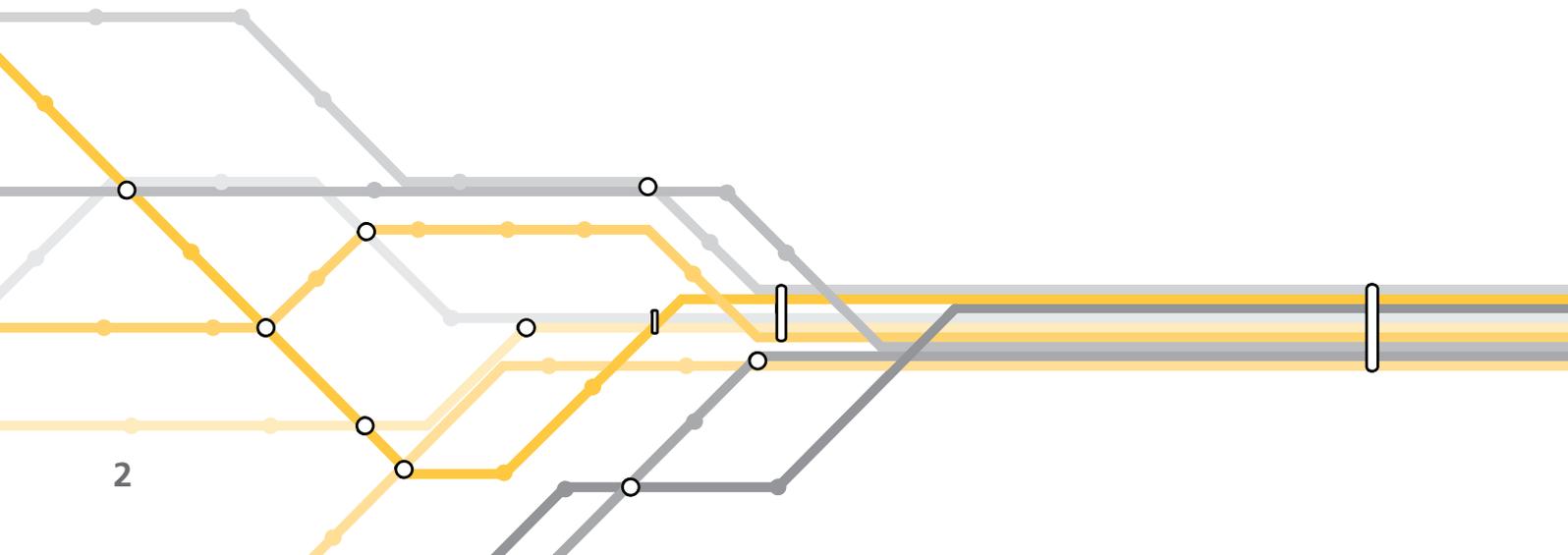




ACCESSORIES TRACK SURVEY



TRACK SURVEY

Track marking

Bolts

p. 4

Ground marking

Prisms

Adjustable holder

Rail shoe

Track measuring bar

TRIMBLE GEDO

Hardware

p. 15

Accessories

Field software

Office software

Data processing

Data analysis

TRACK SURVEY

TRACK MARKING BOLTS

We are offering track marking bolts for mounting or catenary poles, walls, structures and building according to the Deutsche Bahn rules. All bolts are made from stainless steel DIN 1.4305. Special tools are available for survey work.



1 M16 thread

Track marking bolt with M16 thread for span concrete catenary poles.

Order number

5 280 000



2 M8 thread incl. nut and lock ring

Track marking bolt with M8 thread for steel catenary poles. Including nut and lock ring.

Order number

5 280 011



3 M8 thread for plugs

Track marking bolt with short M8 thread for mounting in walls and structures. The bolt is mounting at a M8 plug.

Order number

5 280 012



4 M8 thread inside

Track marking bolt with M8 thread inside for steel catenary poles. Used at M8 bolts mounted with a bolt gun.

Order number

5 280 013

Example:
Adjustable holder with
prism at track marking
bolt



TRACK SURVEY

TRACK MARKING BOLTS

1 Expansion plug M8

Plastic with brass inlet. For mounting at concrete structures. Screw for expansion. Including plastic screw for protection.

Order number **1 416 000**



2 Bolt for wall mounting, M8 thread inside, „MESS-PUNKT“

Mounting by tap in or glueing. Drilling hole of 9-10 mm necessary. Including screw for protection.

Order number **1 326 000**



3 Tap in plug M8/M16

Galvanized plug M8/M16 for tap in mounting.

Order number	Dimensions
5 110 010	M8
5 282 016	M16



4 Tap in tool

Tap in tool for mounting tap in plugs. Protects the hand during tap in.

Order number	Dimensions
5 110 011	M8
5 283 016	M16



5 Adapter M8/M16 to Leica socket, for wall distance 100 mm

The adapter is used in combination with the plugs above. All prisms for Leica socket can be used (e.g. page 7). Wrench size 22.

Order number	M8 - Leica socket	M16 - Leica socket
	5 113 100	5 113 200



6 Adapter M8 to Leica socket, UK type, for wall distance 100 mm

The adapter is used in combination with the plugs above. All prisms for Leica socket can be used (e.g. page 7). Wrench size 19.

Order number **5 113 110**



TRACK SURVEY

GROUND MARKING



1 Cross anchor

not twisted	twisted	Length
5 210 060	5 211 060	600 mm
5 210 080	5 211 080	800 mm
5 210 100	5 211 100	1000 mm
5 210 120	5 211 120	1200 mm
5 210 150	5 211 150	1500 mm

2 Mounting tool for cross anchor

For safe tap in of the cross anchor. Afterwards the final cap can be mounted easily.

Order number **5 213 000**



3 Round cap, incl. level point

for mounting at top of the cross anchor; painted yellow

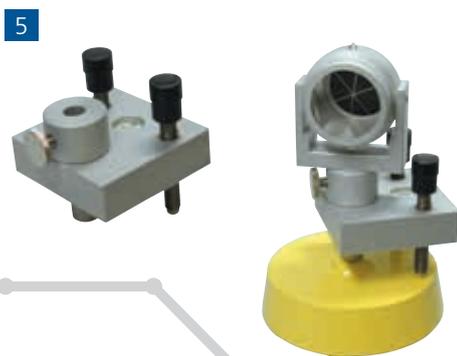
Order number	Height	Order number	Height
5 212 001	54 mm	5 212 004	65 mm



4 Round cap for rail mounting

For mounting on top of a vertical installed rail piece, painted yellow.

Order number **5 212 002**



5 Mini-ground plate with level

For precise setup of a prism about the round cap. The plate can be leveled by two screws. In combination with the precise prism in holder (page 7) the height is 100 mm.

Order number **5 212 003**

TRACK SURVEY

PRISMS

1 Prism in holder, prism diameter 42 mm

Precise prism in aluminium holder. The prisms can be tilted vertical und rotated horizontal based on the 10 mm socket. The measurement point stays in the center (except for prism constant 0 mm).

Available with prism constants 0 mm, -30 mm, -34 mm, -35 mm.

Order number	Prism height	Prism constant	Version
4 520 001 - 0	40 mm	0 mm	10 mm socket
4 520 002 - 0	70 mm	0 mm	for Leica socket
4 520 001 - 30	40 mm	-30 mm (S)	10 mm socket
4 520 002 - 30	70 mm	-30 mm (S)	for Leica socket
4 520 001 - 34	40 mm	-34 mm (Y)	10 mm socket
4 520 002 - 34	70 mm	-34 mm (Y)	for Leica socket
4 520 001 - 35	40 mm	-35 mm (Z)	10 mm socket
4 520 002 - 35	70 mm	-35 mm (Z)	for Leica socket

Example:

Prism in holder at Leica socket



2 Mini prism in holder, prism diameter 25 mm

Precise mini prism in aluminium holder. Prism constant -17 mm.

Order number	Prism height	Version
4 520 020	30 mm	10 mm socket

3 Extension 10 mm socket

Used to extend the height for prisms in holder with 10 mm socket.

Order number	Length	Order number	Length
4 520 130	10 cm	4 520 132	30 cm
4 520 131	20 cm	4 520 133	100 cm

4 Ball prism

Measurement point stays in the center of the ball.

Order number	Diameter	Prism constant
5 312 001	50 mm	-17 mm
5 312 002	20 mm	-7 mm

5 Active target, 10 mm socket, prism constant + 2 mm

Active single prism for Trimble S-series total stations. Power supply by two AAA batteries. The diode is in line with the prism.

Attention: steep vertical angles will cause distance errors because of the parallax aiming.

Order number	4 530 005



TRACK SURVEY

PRISMS



1 Active target in frame complete, PK: +2 mm

Active target in frame for Trimble S-series total stations. 5/8" threads inside and circular level at both ends. Power supply by two AAA batteries. As the prism can be tilted it is possible to avoid distance measurement errors.

Order number **4 530 006**

2 Prism in frame

Prism with 42 mm diameter mounted in a robust aluminium frame. 5/8" thread inside and circular level at both ends. Prism height 50 mm. Available with prism constants 0 mm, -30 mm, -34 mm, -35 mm.

Order number **4 520 101**

3 Extension for prism in frame, 5/8" thread, stainless steel

Order number	Length
4 520 119	20 cm
4 520 120	30 cm
4 520 122	50 cm
4 520 121 - 5/8"	100 cm

4 Point for prism in frame, 5/8" thread, stainless steel

Order number	Length	Order number	Length
4 520 110 - 050	50 mm	4 520 110 - 100	100 mm
4 520 110 - 065	65 mm		

5 Mini prism in frame

Prism with 25 mm diameter mounted in a aluminium frame. M8 thread inside and circular level at both ends. Prism height 30 mm. Prism constant - 17 mm.

Order number **4 520 112**

6 Extension for mini prism in frame, M8 thread, stainless steel

Order number **4 520 113 - 300** 30 cm

7 Point for mini prism in frame, M8 thread, stainless steel

Order number **4 520 114 - 030** 30 mm

TRACK SURVEY

PRISMS

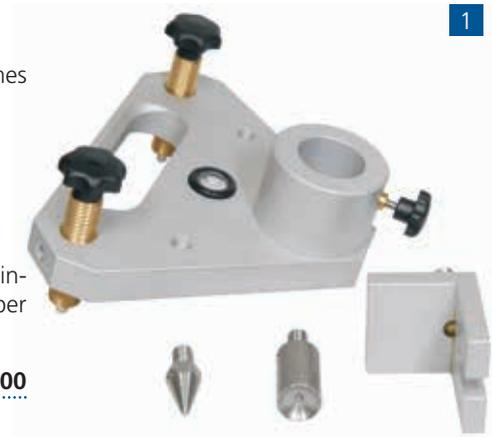
1 Universal ground plate

For quick and high precise positioning of a prism without tripod and prism pole. Comes with three different adapters fitting to various reference points.

- Point for marking bolt with centering
- Adapter for humped bolts without centering
- Angle adapter for wall edges

The groundplate can be rotated around all three adapters and leveled by using two spindles. A circular level shows the levelling. Adapters not used can be screwed at the upper side of the plate.

Order number Height 90 mm **4 610 000**



2 Prism adapter for ground plate

Adapter for different prism systems.

Order number	Version	Height
2a 4 410 000 - 010	5/8"	10 mm
2b 4 410 001	Leica socket	40 mm
2c 4 410 002	10 mm socket	20 mm



3 Ground plate for 10 mm socket

Ideal for quick and high precise positioning of a prism without using a pole or a tripod. Including a point for bolts with centering. For all prisms with 10 mm socket.

Order number Height 90 mm **4 610 100**



4 Point for stakeout

Point for stakeout with circular level for vertical positioning. Available for all standard prism systems. Hardened point available as an option.

Order number	Version	Height
4a 4 611 001	5/8"	60 mm
4a 4 611 011	5/8", hardened point	60 mm
4b 4 611 002	Leica socket	80 mm
4b 4 611 012	Leica socket, hardened point	80 mm
4c 4 611 003	10 mm socket	60 mm
4c 4 611 013	10 mm socket, hardened point	60 mm



TRACK SURVEY ADJUSTABLE HOLDER



1 Adjustable holder with circular level

Developed for quick and precise survey work at Deutsche Bahn railway tracks. The adjustable holder is placed at the DB track marking bolt. The prism on top is leveled by using the circular level. The position is fixed by two screws. The holder turns exactly around the coordinate reference point of the bolt. Extensions are available at page 7.

Order number

5 220 000

Adjustable holder

5 220 001

Adjustable holder incl. prism in holder

2 Transport case for holder with prism (w/o illustration)

Aluminium case with foam inlet for six adjustable holders with prism.

Order number

5 220 002



3 Adjustable holder with side arm

Special adjustable holder for track marking bolts with excentric prism position. An additional screw is used to stabilize the arm. Eccentricity amount is 30 cm.

Order number

5 220 005

Information about German Track Marking System



The coordinate reference point at marking bolts mounted at catenary poles and structures is defined in height by the upper side at the front end and in horizontal by the front end of the bolt.



4 Adjustable holder for Austrian track marking system

Special adjustable holder for track marking bolts.

Order number

5 220 010

Version
for 10 mm socket

5 220 030

Leica socket (w/o illustration)

Information about Austrian Track Marking System



Coordinate reference point is the forward, upper edge of the grooved part.

TRACK SURVEY

RAIL SHOE

The rail shoe is optimized for survey of a rail. The reference for the side attachment is 14 mm below top of the rail. A notch helps to mark the measured position at the rail. The prism position is perpendicular above the reference edge.

1 Rail shoe standard

Order number	Version
5 260 000	5/8", turnable
5 260 001	Leica socket
5 260 002	for 10 mm socket

Example:
Prism in frame with rail shoe



2 Rail shoe with magnet and tubular level

Two magnets for easy and safe positioning at the rail. Level across to the rail for levelling the prism. Available with standard or strong magnets.

standard magnet	strong magnet	Version
5 262 000	5 262 003	5/8", turnable
5 262 001	5 262 004	Leica socket
5 262 002	5 262 005	for 10 mm socket



3 Rail shoe for tram lines

This rail shoe has a shorter leg to enable measurements at grooved rails. Level across to the rail for levelling the prism. With strong magnet.

Order number	Version
5 263 000	5/8", turnable
5 263 001	Leica socket
5 263 002	for 10 mm socket



4 Track adapter for track marking bolts

The front end of a tape (zero at the front end) can be mounted at the adapter. By attaching and clamping the adapter at a track marking bolt the horizontal reference point is identical with the front end of the tape to enable measurements for the side offset.

Order number	5 270 000
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5 Tape stainless steel, plastic coating, 30 m

A steel tape with thick plastic coating for usage at railway lines to ensure isolation between the rails.

Order number	5 270 001
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TRACK SURVEY

TRACK MEASURING BAR

The standard track measuring bar can be extended by additional prism holders and a mechanical cant measuring device. Depending on the additional options just the center line, the center line plus the cant or a full 3D survey of the track can be done.

1 Track measuring bar, standard

Track measuring bar to survey the center line of a railway track. The prism holder is tiltable to position the prism exactly above the center line. By using the precise prism in holder the prism height above the center line is 100 mm. The bar is isolated at one end to avoid an electrical short between the two rails. The attachment enable a precise positioning of the bar. The edge of the attachment is 14 mm below top of the rail. All track measuring bar are manufactured for the gauge 1435 mm. Track measuring bar for other gauges are available on request.

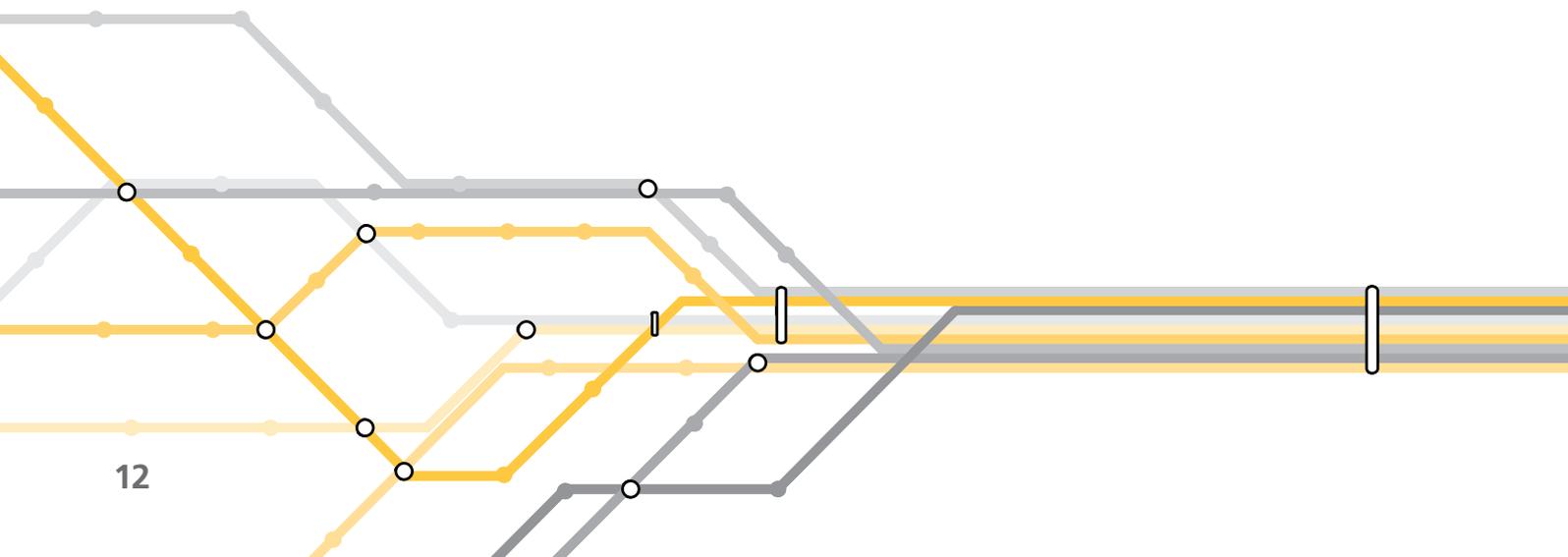
Order number	Version
5 230 000 - 1435	5/8" thread
5 230 001 - 1435	Leica socket
5 230 002 - 1435	for 10 mm socket



2 Track measuring bar for tram lines

This track measuring bar is elevated by 50 mm to be used at track with grass or paving stones between the rails. A shorter attachment enables the use at narrow curves. The bar can be ordered for 1000 mm and 1435 mm gauge. Other gauges on request. Similar to the standard bar other options can be added.

Order number	Gauge	Version
5 235 000 - 1000	1000 mm	5/8" thread
5 235 000 - 1435	1435 mm	5/8" thread
5 235 001 - 1000	1000 mm	Leica socket
5 235 001 - 1435	1435 mm	Leica socket
5 235 002 - 1000	1000 mm	10 mm socket
5 235 002 - 1435	1435 mm	10 mm socket



TRACK SURVEY

TRACK MEASURING BAR

1 Additional prism holder above inner edge of the rail

The prism holder is mounted exactly above the inner edge of the rail at the attachment side.

	5/8" thread	Leica socket	10 mm socket
Order number	5 234 000	5 234 001	5 234 002



1

2 Additional prism holder above the inner edge of the rail, opposite side

The prism holder is mounted at the theoretical position of the inner edge according to the design gauge at the opposite side.

	5/8" thread	Leica socket	10 mm socket
Order number	5 234 003	5 234 004	5 234 005



2

3 Additional prism holder, moveable, opposite side

A spring loaded prism holder is mounted at the opposite side. Therefore the prism is always in position about the inner edge of the rail. Together with the a prism at the attachment side the gauge can be measured.

	5/8" thread	Leica socket	10 mm socket
Order number	5 234 006	5 234 007	5 234 008



3

Example below:

Track measuring bar equipped with an additional holder at the attachment side and an additional moveable holder at the opposite side.



TRACK SURVEY

MECHANICAL GAUGE AND CANT MEASUREMENT DEVICE

1

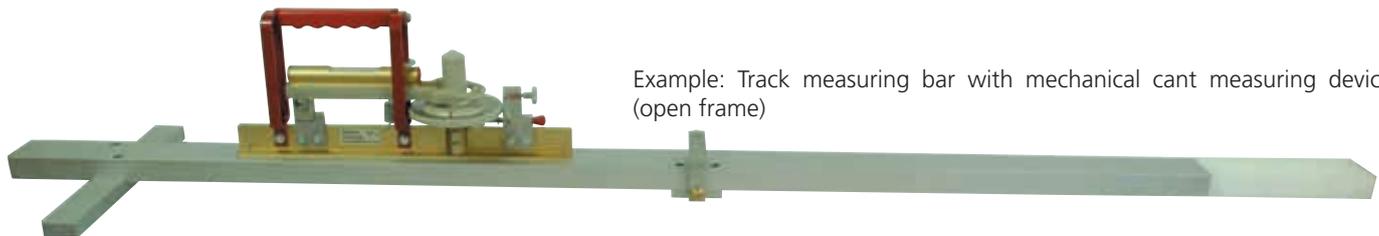


1 Mechanical cant measuring device, open frame

A central precise wheel is used to level the tubular level. The cant is shown at a scale at the wheel. The robust tubular level has an accuracy of 0,7 mm/m. Measurement range for cant: - 40 mm up to +200 mm, 1 graduation mark is equal 1 mm. For gauge 1435 mm.

Order number

5 240 000



Example: Track measuring bar with mechanical cant measuring device (open frame)

2



2 Mechanical cant measuring device, closed housing

A screw at the side is used to level the tubular level. The cant is shown at a small window on top. The robust tubular level has an accuracy of 0,7 mm/m. Measurement range for cant: - 35 mm up to +195 mm, 1 graduation mark is equal 1 mm. Available for gauge 1000 mm and 1435 mm. Ideal for usage in construction environment.

Order number

for gauge

5 240 001 - 1000

1000 mm

5 240 001 - 1435

1435 mm

3 Mechanical gauge measurement device

For the gauge measurement a spring loaded attachment is used. The gauge value is visible through a window on top of the device. The attachment is isolated. The device is available for 1000 mm and 1435 mm gauge. Measurement range: -10 mm to +40 mm. 1 graduation mark is equal 1 mm.

Order number

for gauge

5 250 000 - 1000

1000 mm

5 250 000 - 1435

1435 mm



4 Mechanical cant and gauge measurement device

Cant measuring device with integrated gauge measurement. Measurement range for gauge: -20 mm to +40 mm. Measurement range for cant: -200 mm to +200 mm. For gauge 1435 mm and 1000 mm. Is available as a partable version (only 1435 mm) for easy transport as well.

Order number

for gauge

5 250 100 - 1000

1000 mm

5 250 100 - 1435

1435 mm

Order number partable version

for gauge

5 250 101

1435 mm



TRIMBLE GEDO CE 2.0

HARDWARE

The track measuring system Trimble GEDO is a Module system. The base unit Trimble GEDO CE 2.0 can be used stand alone or in combination with different geodetic sensors and prisms. The system is certified for using as an official measurement tool in several countries (e.g. Deutsche Bahn, Network Rail) or has a type approval in these countries.



TRIMBLE GEDO CE 2.0

HARDWARE

1 Trimble GEDO CE 2.0 Track Measurement Trolley

The Trimble GEDO CE 2.0 measurement trolley consists of a main frame which carries the sensors (gauge, cant, odometer) and electronics, the cross beam with the brake system and the pushing rod. The base version can be used for the 1000 mm gauge. A mounting tool is used to lock and unlock a central screw to mount and dismount the trolley. For other gauges an according gauge adapter is needed. At a two trolley system the base trolley can be used as a prism trolley or a total station trolley.

Order number	Version
7 600 400 - 00	standard
7 600 400 - 20	elevated

2 Trimble GEDO CE 2.0 gauge adapter

There are adapters for all standard gauges available. Adapters for other gauges can be manufactured on request.

Order number	Version
7 600 401 - 10	for Gauge 1067 mm
7 600 401 - 12	for Gauge 1100 mm
7 600 401 - 20	for Gauge 1435 mm
7 600 401 - 30	for Gauge 1520 mm
7 600 401 - 40	for Gauge 1600 mm
7 600 401 - 50	for Gauge 1668 mm
7 600 401 - 60	for Gauge 1676 mm
7 600 401 - 70 (*)	for gauge from 1000 to 1800 mm

(*) Please specify when ordering

3 Trimble GEDO CE 2.0 prism holder

Adapter to use the prisms at the trolley. The short version is recommended at slab track projects which require highest accuracy. The longer version can be used for all standard applications.

Order number	Version
7 600 402 - 10	60 mm
7 600 402 - 11	300 mm

TRIMBLE GEDO CE 2.0

HARDWARE

1 Prism in holder, prism diameter 42 mm

Precise prism in aluminium holder. The prisms can be tilted vertical und rotated horizontal based on the 10 mm socket. The measurement point stays in the center (except for prism constant 0 mm).

Available with prism constants 0 mm, -30 mm, -34 mm, -35 mm.

Order number	Prism height	Prism constant	Version
4 520 001 - 0	40 mm	0 mm	10 mm socket
4 520 002 - 0	70 mm	0 mm	for Leica socket
4 520 001 - 30	40 mm	-30 mm (S)	10 mm socket
4 520 002 - 30	70 mm	-30 mm (S)	for Leica socket
4 520 001 - 34	40 mm	-34 mm (Y)	10 mm socket
4 520 002 - 34	70 mm	-34 mm (Y)	for Leica socket
4 520 001 - 35	40 mm	-35 mm (Z)	10 mm socket
4 520 002 - 35	70 mm	-35 mm (Z)	for Leica socket



2 Trimble GEDO CE 2.0 GNSS Pole Set

Consisting of two robust carbon fiber extensions. Each 750 mm long.

Order number 7 600 402 - 20

3 Trimble GEDO CE 2.0 Total station pillar

Necessary to use the Trimble S-Series total station at the trolley. A special clamp system for the 3-pin system ensures a safe and robust fixation of the instrument.

Order number 7 600 403 - 10

4 Trimble GEDO CE 2.0 reference point prism

The Reference point prism can be used at various marking bolts. It consists of a prism in a frame, an extension 30 cm and two points 50 mm.

Order number 4 520 100 - 30

5 Holder for reference point prism

The holder for the reference point prism can be mounted at the total station trolley and carries the reference point prism.

Order number 7 600 403 - 15



TRIMBLE GEDO CE 2.0

HARDWARE



1 Trimble GEDO CE 2.0 Transport case

There are two difference cases avaiallbe. One very robust case for transport in harsh environment and a very compact case for the daily standrad use.

Order number	Dimensions (L x W x D)	Version
7 600 404 - 10	120 x 70 x 50 cm	standard (w/o illustration)
7 600 404 - 20	120 x 70 x 50 cm	standard for elevated trolley (w/o illustration)
7 600 404 - 12	106 x 55 x 47 cm	kompakt



2 Trimble GEDO CE 2.0 Scanner adapter

The adapter is necessary to use a laser scanner (Trimble TX5, Faro Focus 3D, X130 or X330) at the trolley. The adapter comes with the helical adapter which will be attached to the scanner.

Order number **7 600 403 - 20**



3 Trimble GEDO CE 2.0 Profiler

The profiler is used to measure specific objects and points along the track. Side offsets and height differences can be measured quick and easily. Therefore the profiler can be used for as-built survey at reference points as well for platform gauging. By using the profiler in combination with geodetic sensors, abolsute coordinates for the measured points are calculated.

Order number **7 600 406 - 00**



4 Trimble GEDO CE 2.0 Extension for profiler

To elevate the profiler by 300 mm.

Order number **7 600 403 - 30**

TRIMBLE GEDO CE 2.0

ACCESSORIES

1 Trimble 5-slot charger

Charger for five Trimble S-Series Total Station oder Trimble GNSS batteries. Including power supply.

Order number **51693-00**



1

2 Trimble Lithium-Ionen battery, 5 Ah

Trimble S-Series batteries for total station and trolley.

Order number **99511-00**



2

3 Holder for Trimble TSC3

Holder for control unit Trimble TSC3 at pushing rod of the trolley.

Order number **82758-00**



3

4 Holder for Trimble Tablet PC and Trimble Yuma 2

Order number Version
91487-00 fix, quick release
93315-00 twin ball joint



4

5 Trimble GEDO CE 2.0 antenna, short

Bluetooth antenna for communication between trolley and control unit.

Order number **110-0003**



5

6 Trimble GEDO CE 2.0 antenna, long

Bluetooth antenna for communication between two trolleys (GEDO Vorsys configuration).

Order number **110-0015**



6

7 Cap for bluetooth connector

Protection cap if the trolley is used as a single trolley system.

Order number **4000-0516-01-12**



7

TRIMBLE GEDO CE 2.0

FIELD SOFTWARE SOLUTIONS

All Trimble GEDO software solutions are supporting railway specific requirements. Special transition bend design elements (e.g. clothoid, Bloss, cubic parabula, Cosinuid, etc.) are supported as well as a chainage line and elevated rails at reversal transition bends.



1 GEDO Doc

Software which is used in combination with the track measuring trolley GEDO CE 2.0 for collecting gauge, cant and twist parameters.

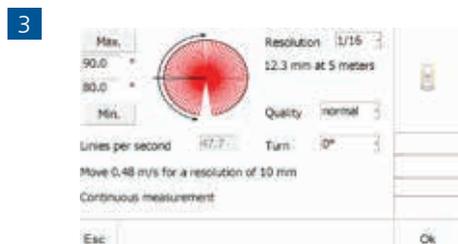
Order number	Version
7 601 005 - 00	for TSC3
7 601 005 - 90	for Tablet PC



2 GEDO Rec

Software which is used in combination with the track measuring trolley GEDO CE 2.0 and a Trimble total station or a Trimble GNSS receiver. Based on the measurements the left rail, center line and right rail together with the cant and gauge are calculated and visualized online in the field. The software supports also the use of the Trimble Profiler to measure side offsets and height differences. Without geodetic sensors gauge, cant and twist parameters can be collected.

Order number	Version
7 601 001 - 00	for TSC2 / TSC3
7 601 001 - 90	for Tablet PC



3 GEDO Rec Module Scan

GEDO Rec Module Scan is a supplementary module for GEDO Rec. It is used in combination with the track measuring trolley GEDO CE 2.0 and a laser scanner (Trimble TX5 or Faro) for controlling the scan process in the field. In the office the implemented helical scan generates a 3D point cloud.

Order number	Version
7 601 001 - 02	for Tablet PC

TRIMBLE GEDO CE 2.0

FIELD SOFTWARE SOLUTIONS

1 GEDO Track Survey

Software for several survey tasks at railway lines. It support Trimble total stations as well Trimble GNSS receivers. Based on the measurements the differences between design and as-built are calculated and visualized online in the field. These are calculated horizontal and in the elevated track system. Beside the current chainage the distance to the next track main point is shown. The software comes with GEDO Office Base for data preparation.

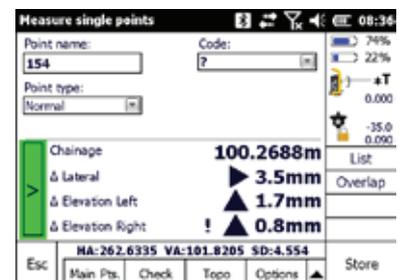
Order number	Version
7 601 002 - 01	for TSC2 / TSC3
7 601 002 - 91	for Tablet PC



2 GEDO Track Bar

Software which is used in combination with the GEDO track measuring bar and a Trimble total station or a Trimble GNSS receiver. Based on the measurements from the geodetic sensor and the cant and gauge values from the trolley the differences between design and as-built are calculated and visualized online in the field. These are calculated horizontal and in the elevated track system for the complete track (left and right rail). The software can be used during slab track construction or for geodetic pre-measuring for tamping. The software comes with GEDO Office Base for data preparation.

Order number	Version
7 601 002 - 03	for TSC2 / TSC3
7 601 002 - 93	for Tablet PC



3 GEDO Track Trolley

Software which is used in combination with the track measuring trolley GEDO CE 2.0 and a Trimble total station or a Trimble GNSS receiver. Based on the measurements from the geodetic sensor and the cant and gauge values from the trolley the differences between design and as-built are calculated and visualized online in the field. These are calculated horizontal and in the elevated track system for the complete track (left and right rail). The software can be used during slab track construction or for geodetic pre-measuring for tamping. The software comes with GEDO Office Base for data preparation.

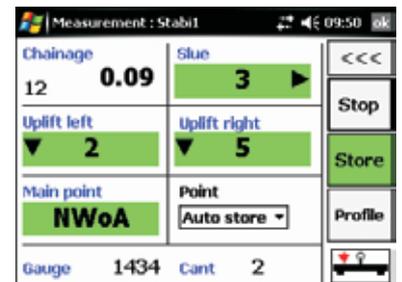
Order number	Version
7 601 002 - 02	for TSC2 / TSC3
7 601 002 - 92	for Tablet PC



4 GEDO Vorsys

Software for high productive pre-measurement for tramping utilizing two trolleys in combination with a Trimble S-Series total station. The alignment based measurement method guarantees high inner accuracy and very high productivity. Measurements can be taken based on classic paper plans or based on digital alignment data. All differences between design and as-built are shown in field. An optimized user interface enables the usage by non survey staff.

Order number	Version
7 601 021 - 00	for TSC2 / TSC3
7 601 021 - 90	for Tablet PC



TRIMBLE GEDO CE 2.0

OFFICE SOFTWARE - DATA PROCESSING AND ANALYSIS

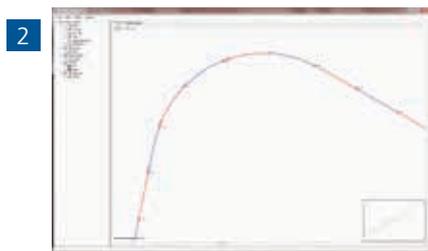
Several Trimble GEDO Office software Modules are available for data preparation, data processing and data analysis.



1 GEDO Office Module Base

Module for alignment data input and import of design data. Standard design data formats are supported (e.g. Verm.ESN, LandXML). Alignment data can be checked to ensure the use of the data in the field.

Order number **7 601 004 - 10**



2 GEDO Office Module Rec

Module for processing GEDO Rec field data. Station setups can be re-calculated. Different matching algorithms are used to connect the overlapping areas. Coordinate export for the left rail, center line and right rail together with the cant and gauge values. Based on alignment data the differences between design and as-built are calculated.

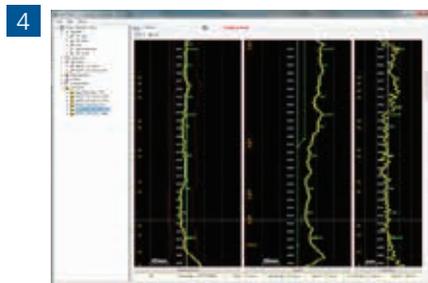
Order number **7 601 004 - 11**



3 GEDO Office Module Vorsys

Module for processing GEDO Vorsys field data. Measured data can be reprocessed based on another design or new reference point coordinates. Processing of measurements taken without alignment data for track survey purposes.

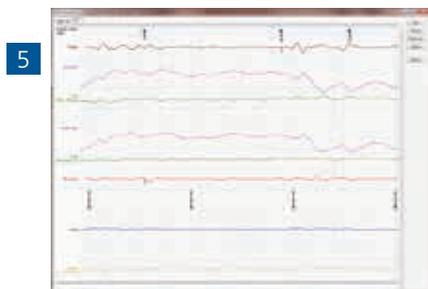
Order number **7 601 004 - 13**



4 GEDO Office Module Tamp

Modul for data preparation for tamping machines. Measured and processed data from GEDO Rec, GEDO Track and GEDO Vorsys measurements can be used. A graphical interface allows an easy ramp definition by taking care of minimum lift values, maximum lift and shift values and other constrains. The data are exported for various machine types (e.g. Plasser DosALC, Win ALC, WinBAO; Harsco, Plasser American, Matisa, etc.).

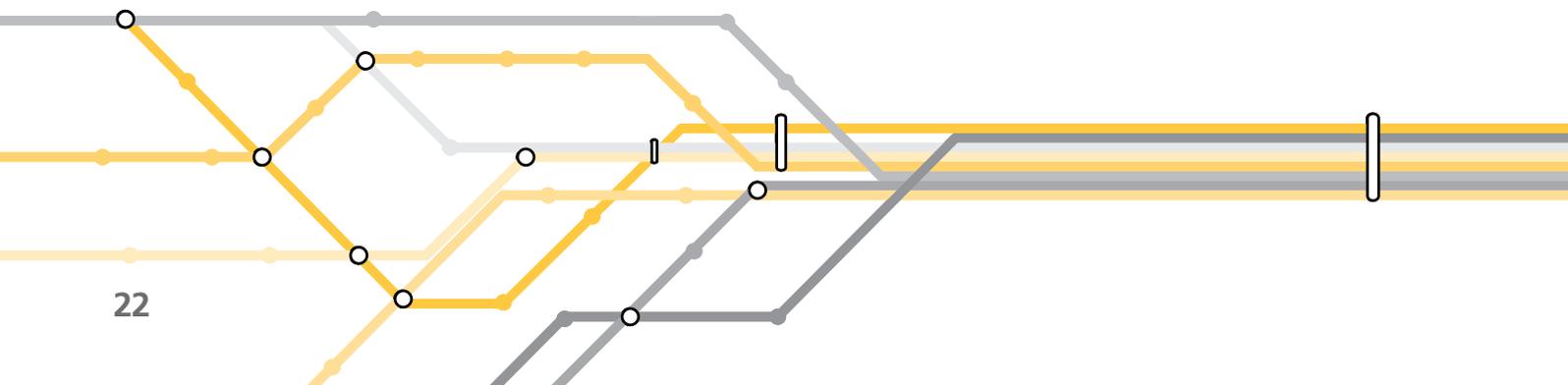
Order number **7 601 004 - 14**



5 GEDO Office Module Quality

Module for quality report generation. Special reports like the MKS (Handersatzmessug for Deutsche Bahn) and other local reports (e.g. Speedraiser, Tucrail) can be generatad as well as standard travel chrod reports with free defined chord lengths.

Order number **7 601 004 - 15**



TRIMBLE GEDO CE 2.0

OFFICE SOFTWARE - DATA PROCESSING AND ANALYSIS

1 GEDO Scan Office 2.0 PreProcessing

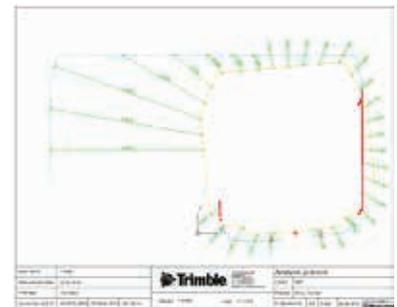
Software to match the scanner data and trolley measurements. So processed data can be used immediately for relative clearance analysis. Further synchronization based on geometry data generates a 3D point cloud.

Cross sections generated at GEDO Scan Office can be thinned, visualized and dimensions drawn automatically. Export to DXF and special clearance formats (WinLUE and Clearroute).

Order number **7 601 051 - 10**



1



2 GEDO Scan Office 2.0

Software for railway track specific analysis of 3D point clouds. Track clearance can be checked based on static envelopes or a waggon model along the as-built track as well according to a new design. Measurement of distances between assets and the track and point registration. Cross section generation for further processing and analysis. Special functionality for clearance check and documentation at Deutsche Bahn (WinLUE for LIRA data base).

Order number	Version
7 601 051 - 20	GEDO Scan Office Module Point Cloud
7 601 051 - 30	GEDO Scan Office Module WinLUE
7 601 051 - 31	GEDO Scan Office Module Clearroute



2

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