

GEDO REC

TRACK SURVEY WITH TRACK MEASUREMENT TROLLEY

Trimble GEDO systems for surveying railway lines capture the absolute track position, cant and track gauge. Intermediate points with special coding can be registered. The recording meets the highest precision requirements. Measurements are made without reference to the track and serve as a planning basis for reconstruction and expansion, or as a basis for acceptance after track reconstruction or new track construction.

TRIMBLE GEDO SYSTEMS

Trimble GEDO systems can be used for various applications in measuring, recording and analyzing track position and track quality, as well as for construction and maintenance activities. The instruments and software of the Trimble GEDO systems are specifically designed for the various surveying tasks on railway lines and simplify the work in the field and in the office. Using standard data formats, information can be exchanged with leading software products for track planning and track maintenance machinery.

SYSTEM CONFIGURATION

Trimble GEDO CE 2.0

Track measurement trolley with sensors for measuring gauge and cant. In combination with a Trimble control unit suitable for use in the field, this forms the basis for a simple and fast acquisition of the most important parameters for assessing track quality. The track measuring trolley can easily be lifted off the track by one person before a train passes through.

Trimble Access Rail module GEDO Rec Trolley ⁽¹⁾

Trimble Access based software for geodetic track survey utilizing the Trimble GEDO CE 2.0 track measurement trolley and a Trimble S-Series total station or Trimble GNSS receiver.

Trimble GEDO Office

Import and preparation of design data and exchange with external systems.

Trimble GEDO Office module Rec

Software for processing and analysing measurements. In addition, the calculation of deviations from a target track position can be carried out.

Trimble GEDO Office module Quality

Processing, analysis and verification of measurement data with reports for corrections and documentation for quality assurance.

Trimble GEDO Office module Monitoring

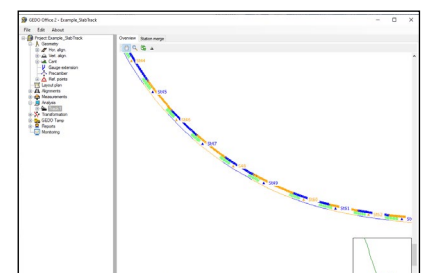
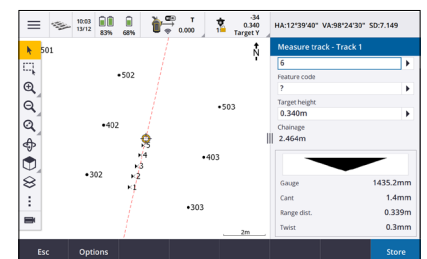
Software for comparison of measurements from different epochs for track monitoring purposes and control of tamping work.

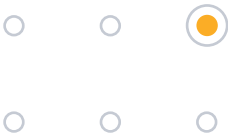
Trimble GEDO Profiler ⁽¹⁾

Laser measurement system with angle encoder for fast and accurate measurements of objects along the track. It can be used to check the track position at known positions and to measure distances to platforms and other fixed structures. The measurement can be purely relative to the current track position or in an absolute coordinate system. It is also possible to capture topo points along the track.

Key Benefits

- ▶ Measurement of three-dimensional track position, track gauge and cant, as well as calculation of twist in one step
- ▶ Total station or GNSS based data acquisition for reliable and accurate positioning
- ▶ Measurement of long track sections possible without full track closure and impact on train traffic
- ▶ High productivity and flexibility lowers costs and reduces personnel expenses
- ▶ Station setup on tripod or secondary trolley
- ▶ Optimized field work procedures through consolidation of results in the office
- ▶ Travel chord evaluation for analysis of the relative track position





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TRACK SURVEY WITH TRACK MEASUREMENT TROLLEY

GENERAL	
APPLICATIONS	
	As-built documentation of existing track Main track, side track, tram, metro, industrial lines. Optionally with Profiler ⁽²⁾ for checking the track position at known points and distance measurement to objects close to the track.
PERFORMANCE	
System accuracy with Totalstation	±1 mm in Stop&Go-Mode ±3 mm in Kinematic Mode
System accuracy with GNSS	±2 cm to 4 cm
Measurement speed with Totalstation(s)	600 to 1.200 m/h
Measurement speed with GNSS	up zu 3.000 m/h
SYSTEM REQUIREMENTS	
Supported instruments ⁽¹⁾	Trimble S-series total stations (i.e. S7, S9) Trimble scanning total stations (i.e. SX10, SX12) Trimble GNSS systems (i.e. R10, R12, R12i)
Controllers	Trimble TSC7, T7 and T100 controllers (Windows® OS) Trimble TSC5 (Android OS)
Trimble Access Version	2023.10 or above (for Windows OS) 2023.10 or above (for Android OS)
Software compatibility	Trimble Access Rail module GEDO Rec Trolley

TRIMBLE GEDO CE 2.0	
Description	Track-mounted trolley (Extensions are possible)
Gauges	1.000 mm, 1.067 mm, 1.435 mm, 1.520 mm, 1.524 mm, 1.600 mm, 1.668 mm (other gauges on request)
Weight	16,8 kg
GAUGE MEASUREMENT	
Range	-20 mm to +60 mm
Accuracy	±0,3 mm
CANT MEASUREMENT	
Range	±9° or ±235 mm at 1.435 mm track gauge
Accuracy	±0,5 mm (static)
BATTERY	
Type	Trimble S-Series Li-Ion, rechargeable
Life	8 - 10 h
COMMUNICATION	
Connection to control unit	Bluetooth®

⁽¹⁾ Analog to the support in Trimble Access

⁽²⁾ For users who want to use the Trimble GEDO Profiler, the Windows application Trimble GEDO Rec is available



Specifications subject to change without notice.

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