SPEC SHEET

GEDO REC

Track survey with electronic track measurement bar

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.

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
- Optimized field work procedures through consolidation of results in the office
- Travel chord evaluation for analysis of the relative track position
- Low weight of the electronic GEDO Track Bar allows for easy handling

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System configuration

Electronic Trimble GEDO Track Bar

Electronic track measurement bar, equipped with sensors for measuring track gauge and cant. In combination with a Trimble control unit and a Trimble total station it forms the basis of this measurement system.

Trimble Access Rail module GEDO Rec Bar

Trimble Access™ based software for geodetic track survey utilizing the electronic Trimble GEDO Track Bar 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

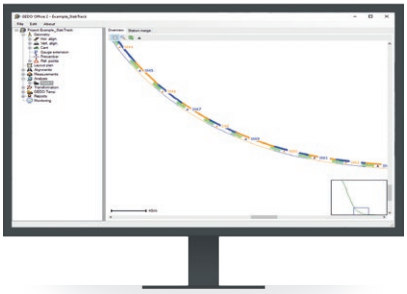
Software for processing and analyzing measurements. In addition, the calculation of deviations from a target track position can be carried out.

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.



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General	
Applications	As-built of existing railway lines
Performance	
Inner system accuracy	±0.3 mm
Position accuracy	< 1 mm
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, R980)
Controllers	Trimble TSC7 and T110 controllers (Windows® OS) Trimble TSC710, TSC510 (Android™ OS)
Trimble Access version	2023.10 or above (for Windows OS) 2023.10 or above (for Android OS)
Software compatibility	Trimble Access Rail modules GEDO Rec Bar and GEDO Rec Trolley

Trimble GEDO track bar	
Description	Electronic track measurement bar
Variants	1.435 mm track gauge Customer specific track gauges (760 mm up to 1.676 mm)
Weight	4.3 kg
Gauge measurement	
Range	–20 mm to +45 mm
Accuracy	±0.3 mm
Cant measurement	
Range	±8°
Accuracy	±0.5 mm
Battery	
Type	Trimble S-Series Li-Ion, rechargeable
Life	> 20 h
Communication	
Connection to control unit	Bluetooth®

[1] Analog to the support in Trimble Access

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PN 022516–825A (03/26)