GEDO REC

GEODETIC TRACK SURVEY

The Trimble GEDO Rec track measurement system is a fast and efficient geodetic track surveying system to measure the position of existing tracks. In a single step, the three-dimensional position of the track is recorded together with track gauge and cant. The data collected this way can be used in geo-information systems, for design purposes and planning work during track reconstruction and for quality control.

TRIMBLE GEDO SYSTEMS

Trimble GEDO systems can be used for various applications to measure, record and analyze track position and quality, as well as for construction and maintenance work. Trimble GEDO instruments and software are designed specifically for various surveying tasks on railway lines, simplifying work procedures in the field and in the office. Using standard data formats, information can be exchanged with leading track design software products and track maintenance equipment.

SYSTEM COMPONENTS

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 GEDO Rec

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 Modul Rec

Software for processing and analysing GEDO Rec measurements as well as data exchange with external systems. In addition, the calculation of deviations from a design track position can be carried out.

Trimble GEDO Office Modul Quality

Software to generate compliance reports ensuring conformity within track safety and quality parameters.

Trimble GEDO Office Modul Monitoring

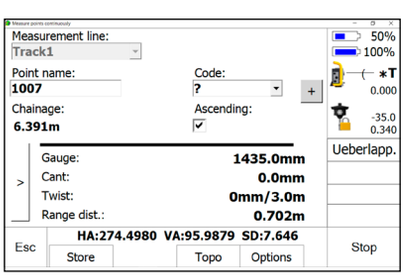
Software for comparison of measurements from different epochs for track monitoring purposes and control of tamping work.

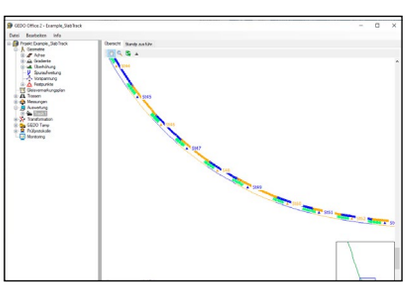
Trimble GEDO Profiler

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
- Measurement of long track sections possible without full track closure and impact on train traffic
- 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
- Station setup on tripod or secondary trolley
- Use of a universal track measurement trolley with modular expansion options





Trimble

DATASHEET

FOR TRACK AS-BUILT SURVEY

GENERAL

Application ..... As-built documentation of existing track
Main track, side track, tram, metro, industrial lines

System accuracy

with total station ..... ±1 mm in Stop&Go Mode
±3 mm in Kinematic Mode
with GNSS ..... ±2 cm to 4 cm

Performance

with total station ..... 600 to 1,200 m/hour
with GNSS ..... Up to 3,000 m/hour

Measurement speed

with total station: ..... 2,5 Hz (S5 and S7)
10 Hz (S8 and S9)
Supported total stations ..... Trimble S-Series
Trimble S9 is recommended
with GNSS ..... 1 Hz RTK
Supported GNSS-Receiver ..... Trimble R-Series
Trimble R12 is recommended

TRIMBLE GEDO CE 2.0 TRACK MEASUREMENT TROLLEY

Description ..... Track-mounted trolley
Gauges ..... 1000 mm, 1067 mm, 1435 mm, 1520 mm, 1524 mm, 1600 mm, 1668 mm
other gauges on request
Weight ..... 16.8 kg

Gauge measurement

Range ..... –20 mm to + 60 mm
Accuracy ..... ±0.3 mm

Cant measurement

Range ..... ±10° or ±265 mm
Accuracy ..... ±0.5 mm (static)

Battery

Type ..... Trimble S-Series Li-Ion, rechargeable
Life ..... 8 to 10 hours

TRIMBLE GEDO CE 2.0 PROFILER

Weight ..... 3.5 kg
Measurement range ..... 0.3 m to 30 m
Typical accuracy for distance measurement ..... ±1.5 mm

TRIMBLE TSC7 CONTROLLER

Operating system ..... Windows® Microsoft 10 Pro
Operation ..... Touchscreen, Keyboard
Interfaces ..... USB, RS232, Bluetooth®, WLAN (802.11a/b/g/n)
Environmental protection IP68; MIL-STD-810G
Temperature range ..... –20 °C to +60 °C
Weight ..... 1.6 kg

Battery

Life ..... up to 7 hours

TRIMBLE S9 TOTAL STATION

Weight ..... 5.5 kg
Angle accuracy ..... 0.5'' or 1''
Typical accuracy for distance measurement ..... 0.8 mm + 1 ppm or 1 mm + 2 ppm

TRIMBLE R12 GNSS SYSTEM

Interfaces ..... USB, Bluetooth®, WiFi
Environmental protection IP67; MIL-STD-810F, FIG.514 5C-1
Weight ..... 1.12 kg

Battery

Life ..... up to 6,5 hours

Specifications subject to change without notice.

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