

GEDO IMS

HIGHLY PRODUCTIVE PRE-MEASUREMENT FOR TAMPING

The Trimble GEDO IMS track measurement system is a fast and efficient geodetic system for measurement and quality control in combination with track tamping machines and associated tasks. The state-of-the-art inertial measurement technology used in the system guarantees maximum productivity, largely independent from weather conditions. Reduced downtime as well as fast data transfer increases tamping machine productivity. The high accuracy and continuous, error-free data flow increases the track position quality. After the tamping work has been completed, the system is used for quality control. The internal accuracy and accuracy and absolute track position are measured in a single operation.

TRIMBLE GEDO SYSTEMS

Trimble GEDO systems can be used for various applications to measure, record and analyze the track position and quality, as well as for construction and maintenance work. Trimble GEDO instruments and software are designed specifically for the diverse surveying tasks on railway lines, simplifying work procedure 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 CONFIGURATION

Trimble GEDO CE 2.0

Track measurement trolley with sensors for measuring gauge and cant. Together with a Trimble control unit suitable for use in the field, this forms the basis for the 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 IMU

High-precision sensor with inertial measurement technology optimised for use in combination with Trimble GEDO track measurement systems. Systems equipped with this sensor allow for highly productive and accurate track survey. By combining it with other sensors, the Trimble GEDO IMU can be used for a wide range of track surveying tasks. The measurements are carried out almost independent of weather conditions.

Trimble GEDO IMS

Field software to control track measurement in combination with Trimble GEDO CE 2.0 track measurement trolley and Trimble GEDO IMU. The absolute track position and relative track geometry are recorded together with track gauge, cant and twist. Control points and track main points along the track alignment are displayed during the measurement.

Trimble GEDO Office module Tamp

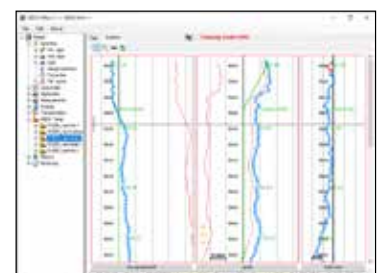
Software for preparing data for tamping machines. Ramps at the beginning and end of tamping and at constraint points can be created very easily. For data exchange with the machines, the formats of all well-known manufacturers are supported.

Trimble GEDO Office module Quality

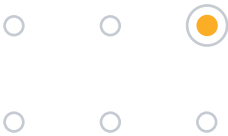
Software for generating reports to verify relative the track geometry through a travel chord to ensure conformity with track safety and quality parameters.

Key Benefits

- ▶ Simple and self-contained track measurement trolley captures track position, gauge and cant in a single operation
- ▶ Precise and reliable control of track geometry
- ▶ Short initialization time allows rapid on-site use
- ▶ Easy to use and familiar method of measuring reference points
- ▶ Flexibility in utilising additional sensors according to application
- ▶ Fast analysis and transfer of tamping data to the tamping machine and rapid quality report generation for construction companies
- ▶ Reduced time for documentation and acceptance measurement
- ▶ Import of digital alignment data and data validation before using it in the field



Find out more:
gedo.trimble.com



GEDO IMS

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GENERAL	
APPLICATIONS	
	Pre-measurement for reconstruction and tamping Acceptance measurement for the preparation of test reports
PERFORMANCE	
Relative accuracy	0,3 mm for standard chord length (20 m)
Absolute accuracy	+/- 1 mm horizontal and vertical achievable depending on external reference, line length and track conditions
Initialisation time	5 minutes
Measurement frequency	200 Hz
Measurement speed (relative)	up to 5.000 m/h
Measurement speed (with Profiler)	up to 4.000 m/h
SYSTEM REQUIREMENTS	
Supported instruments	Trimble S-series total stations (i.e. S7, S9)
Controllers	Trimble TSC7, T7 and T100 controllers (Windows® OS)
CONFORMITY	
EN 13977	Portable trolleys for rail applications
EN 13848-4	Measurement of relative track geometry

TRIMBLE GEDO CE 2.0 WITH TRIMBLE GEDO IMU	
Description	Track-mounted trolley with IMU (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, 1.676 mm (other gauges on request)
Weight	24,5 kg
GAUGE MEASUREMENT	
Range	-20 mm to +60 mm
Accuracy	±0,3 mm
CANT MEASUREMENT	
Range	±9° or ±235 mm at 1.435 mm gauge
Accuracy	±0,5 mm (static)
BATTERY	
Type	Trimble S-Series Li-Ion, rechargeable
Life	6 - 8 h (hot-swappable)
COMMUNICATION	
Connection to control unit	Bluetooth®
IMU	WLAN
TRIMBLE GEDO PROFILER	
Weight	3,5 kg
Range	0,3 m to 30 m
Accuracy (typical)	±1,5 mm



Specifications are subject to change without notice.

NORTH AMERICA

Trimble Inc.
10368 Westmoor Dr
Westminster CO 80021
USA

EUROPE

Trimble Railway GmbH
Korbacherstraße 15
97353 Wiesentheid
GERMANY
gedo.trimble.com

ASIA-PACIFIC

Trimble Navigation
Singapore PTE Limited
3 HarbourFront Place
#13-02 HarbourFront Tower Two
Singapore 099254
SINGAPORE



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