



PRECISE CONTROL FOR SLAB TRACK ADJUSTMENT

The Amberg Slab Track GRP 1000 system provides precise control for slab track installation and adjustment. A fully integrated workflow links real-time field measurement with dedicated slab track reporting in the office. Proven on major high-speed projects, including extensive use across China's high-speed network, it delivers actionable correction values for on-site adjustment and dependable compliance with design.

Hardware Configurations

- **GRP 1000:** Total Station + Prism on Trolley. Total station on tripod, resected to control. Tracks prism on trolley for absolute 3D position, combined with trolley sensor data: gauge, cant, and odometer.
- *Note: For fast slab track acceptance workflows, refer to the Amberg Slab Track IMS 1000 / 3000 datasheet.*

Slab Track Adjustment Workflow

- **Setup & Positioning:** Total station resected into control points, tracking prism on trolley.
- **Real-Time Guidance:** Immediate display of horizontal, vertical, gauge, and cant deviations against design.
- **Rough to Fine Adjustment:** Intuitive on-screen feedback supports fast rough positioning and precise fine adjustment of slabs.
- **Correction Output:** Generate tabular values for adjustment plates/shims to bring slab track into tolerance.

Amberg Rail Software – Slab Track Module

- Integrated field and office workflow for slab track adjustment
- Real-time deviation display with intuitive, sleeper-based feedback
- Automatic error compensation for smooth tie-ins
- Correction plate/shim values generated per sleeper for direct application
- Dedicated slab track reporting tools in Amberg Rail support both adjustment and acceptance workflows



SYSTEM PERFORMANCE AND TECHNICAL DATA

System ^{(1) (2)}	
	GRP 1000
Gauge [mm]	1000, 1067, 1220, 1372, 1435, 1495, 1520/1524, 1600, 1668/1676
Weight [kg] (re 1435 mm gauge)	28.5
Gauge measurement	
Range [mm] (re nominal gauges)	-20 to +55
Accuracy [mm]	±0.3
Cant measurement	
Range [mm] (re 1435 mm gauge, range ±10°)	±260
Accuracy [mm]	±0.5
Track position measurement	
Track position accuracy [mm] (single measurement mode)	±1
Track position accuracy [mm] (tracking mode)	±3
Trolley battery	
Type	Amberg GBS3100 Li-Ion, rechargeable
Operating time [h]	>8
Field computer battery	
Type	Panasonic FZ-G2 compatible
Operating time [h]	>8 if connected to GBS3100
Environmental specifications	
Working temperature range [°C]	-10 to +50
Humidity [%] (non-condensing)	<80

Performance on track ⁽¹⁾	
	GRP 1000
Typical track adjustment productivity [m/day]	>400
Typical track documentation and acceptance productivity [m/h]	>100

Positioning sensors & accessories			
	Leica	Topcon	Sokkia
Total station (≤1")	TS15/16, TS20, TS50/60, TS30, MS50/60	GT-1500 / 1200, MS AXII	iX-1500/1200, NET AXII
Prism	AP20, Round, Mini, 360, 360 Mini, Mini Zero	Prism-2, ATP1	AP01, ATP1

Slab track operations	
Typical track applications	High-speed lines, light rail, metro/urban lines, tunnel refurbishment projects, industrial tracks
Slab track installation	Compatible with construction methods such as Rheda 2000, Iron-Horse, and others
Tunout installation	Suitable for turnout systems, including solutions with structural gauge enlargement (e.g. FAKOP®). Compatible with systems from BWG, Cogifer, and others
Documentation & acceptance	Supports acceptance and documentation of common slab track systems, including Bögl System, J-Slab, Rheda 2000, Iron-Horse, Züblin, and more

System approvals	
CE Conformity	
EN 61326-1:2013, EN 61000-6-2:2005, EN 61000-6-4:2007/A1:2011, EN 60825-1:2014, EN 13848-4, EN 13977:2011, Directives 2014/30/EU, Directives 2014/35/EU, Directives 2011/65/EU	
GRP System FX approvals from	
Network Rail / London Underground (UK), Deutsche Bahn (DE), SBB (CH), SNCF (FR), ÖBB (AT), RFI (IT), Adif (ES), ProRail (NL), Infrabel (BE)	

1) Typical performance may vary depending on project conditions.

2) Results depend on factors such as control point density, control point quality, and overall project conditions