

# Amberg Slab Track Plus

## GRP 1000



### The configuration consists of

- Premium hardware GRP 1000
- Application specific software Slab Track Plus
- Robust and guaranteed precision thanks to GRP Fidelity
- First-class application support

### Technical data GRP 1000 for Amberg Slab Track Plus

| System configuration   |  | Positioning  |  |
|--|--|--|--|
| Gauge (mm)   | 1000, 1067, 1435, 1520/24, 1600, 1668/76 | Leica total stations,<br>- motorised, ATR<br>- radio modem   | TS30<br>TPS1200<br>TPS2000                           |
| TGS FX   |  | Power supply   |  |
| Gauge<br>- for nominal gauges  | - 25 mm to<br>+ 65 mm                    | TGS FX – sensors   | Leica<br>GEB171,<br>battery,<br>rechargeable         |
| Superelevation (Cant)<br>- at 1435 mm gauge  | +/- 260 mm<br>(+/- 10°)                  | Battery life*)   | > 8 h  |
| Sensor performance   |  | Panasonic control computer   | Panasonic Li-Ion battery, rechargeable               |
| Track geometry measurement<br>(Position, Gauge, Superelevation)  |  | Battery life*)   | > 4 h  |
| Single measurement<br>Final adjustment   | 4 s                                      | Optional:<br>Extended power supply for both, TGS FX and control computer<br>- also suitable for TPS/GPS supply | ATPC 1000 PowerCube, lead acid battery, rechargeable |
| Tracking mode<br>Rough adjustment  | 0.3 s                                    | Battery life*)   | > 10 h   |
| Depending on conditions and surveying mode of total station type.  |  |  |  |
| System accuracy  |  | *) Depending on conditions.  |  |
| <b>Environmental specifications</b>  |  |  |  |
| Absolute system accuracy *)  |  | Working temperature range  | -10° to +50° C                                       |
| Single measurement   | +/- 1.0 mm                               | Humidity   | < 80 %   |
| Tracking modulus   | +/- 3.0 mm                               | - non-condensing   |  |
| Gauge  | +/- 0.3 mm                               | System weight  |  |
| Superelevation   | +/- 0.5 mm                               | GRP 1000<br>- ready to measure<br>- incl. battery and computer<br>(without ATPC 1000)                          | 27 kg  |
| Inner system accuracy  | +/- 0.5 mm                               |  |  |
| *) Depending on e.g. control point quality, atmospheric conditions, total station type, surveying mode and project conditions. |  |  |  |

### System use and typical system performance

| Slab Track applications   |  |
|---|--|
| Typical project applications  | - High performance lines<br>- Light rail<br>- Metro<br>- Tunnel refurbishment<br>- Industrial tracks |
| Installation Slab Track   |  |
| Suitable for Slab Track systems   | Track based construction methods, e.g.<br>- Rheda 2000<br>- Iron-Horse method, ...                   |
| Production rate<br>- depending on construction method and project conditions  | > 400 m/d  |
| Installation Slab Track – turnouts  |  |
| Suitable for turnout systems, incl. structural gauge enlargement (e.g. FAKOP®)  | - BWG<br>- Cogifer, ...  |
| Documentation and acceptance  |  |
| Compatible with Slab Track systems  | - Bögl System<br>- J-Slab<br>- Rheda 2000<br>- Iron-Horse method<br>- Züblin Slab Track, ...         |
| Measurement performance<br>- precision track as-built per sleeper   | > 100 m/h  |
| Amberg Slab Track reference extract   |  |
| Ambergs' Slab Track solution has proven its high performance all over the world. Demanding projects have been successfully realised e.g. in Germany, Great Britain, Sweden, Spain, China, Taiwan, Singapore, Arab Emirates. |  |

# Amberg Slab Track Plus

## Amberg Rail 2.0

### Amberg Slab Track

394.3 km/h? No problem! Amberg Slab Track is the integrated surveying solution, optimised for the typical requirements during construction, monitoring and maintenance of slab track projects.

#### Project data management

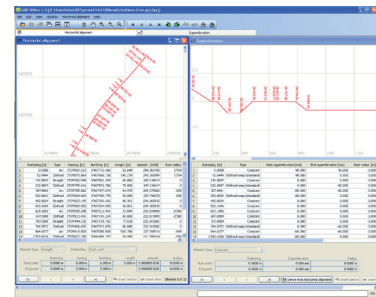
- Central database for input, visualisation and management of all track project data – including route data chronology, control points, and survey and construction progress.
- Supports all common geometry element types for track axis, gradients, station axis, superelevation range, gauge range including gauge enlargement at high-speed points (e.g. FAKOP®).
- Provision of all track project data for subsequent surveying tasks and evaluations.

#### Surveying

- Determination of current track position during construction together with precision total station.
- Display of relative deviations (direction and height) to design in real-time - Data update frequency up to 3 times per second.
- Amberg Compensation Method - Real-time compensation of control point inaccuracies – resulting in improved track geometry quality already during construction.

#### Evaluation

- Automatic survey data processing and evaluation – including automatic linking of subsequently surveyed track sections.
- Complete surveyed data management including automatic incorporation of subsequent re-measurements.
- Comprehensive analysis and documentation of inner and outer track geometry quality.
- Interactive creation of correction lists supported with real-time simulations about the resulting final track position.



The screenshot shows a detailed 'Slab track report' table. The table has columns for 'Station', 'Type', 'Start', 'End', 'Length', 'Radius', 'Height', 'Inner', 'Outer', 'Inner', 'Outer', 'Inner', 'Outer', 'Inner', 'Outer'. It lists various track elements and their corresponding data.

Amberg Technologies AG  
Trockenloostrasse 21  
CH-8105 Regensdorf  
Switzerland

Phone +41 44 870 92 22  
Fax +41 44 870 06 18

info@amberg.ch  
www.amberg.ch

