

Amberg Clearance Plus GRP 5000



The configuration consists of

- Premium hardware GRP 5000
- Application specific software Clearance Plus
- Robust and guaranteed precision thanks to GRP Fidelity
- First-class application support

Technical Data GRP 5000 for Amberg Clearance Plus

| System configuration | | Cont. system accuracy | |
|---|---|--|---------------------------------|
| Gauge (mm) | 1000, 1067, 1520/24, 1600, 1668/76 | Profile accuracy - relative to track axis - at a distance of 5 m | +/- 10 mm |
| Profiling unit | Amberg Profiler 5002 Profiler 5003 | Object point accuracy*) - GRP with Totalstation | +/- 1.5 cm |
| Compatible | Leica HDS6000 6100, Z+F Imager 5006 5006i | *) Typical project accuracy. Depending on e.g. atmospheric conditions, control point quality, positioning sensor and project conditions. | |
| Profiler 5002 / 5003 | | Positioning | |
| Scanner type | Infrared phase shift | Leica total stations - motorised, ATR - radio modem | TPS30 TPS1200 TPS2000 |
| Range (Ambiguity interval) | 79 m | Leica GPS | GPS1200 |
| Sensor performance | | Power supply | |
| Profile surveying (Lateral off-set and height to track axis) | | GRP System | GBC 5000, battery, rechargeable |
| Max. data acquisition rate - Pixel/s | 500'000 px/s | Battery life*) | > 5 h |
| Amberg Profiler Max. scan speed - Rotation/sec | 5002 100 rps 5003 50 rps | Panasonic control computer | Li-Ion battery, rechargeable |
| Track geometry measurement (Position, Gauge, Superelevation) | | Battery life*) | > 4 h |
| Kinematic measurement - data frequency | TPS: 7 Hz GPS: 10 Hz | *) Depending on conditions. | |
| System accuracy | | Environmental specifications | |
| Track coordinate*) - GRP with total station | +/- 5 mm | Lighting conditions | Darkness to daylight |
| Superelevation | +/- 1.0 mm | Working temperature range | -10° to 45° C |
| Gauge | +/- 0.3 mm | Humidity | Non-condensing |
| System weight | | | |
| GRP 5000 - ready to measure - incl. battery and computer | 56 kg | | |

System use and typical system performance

| Clearance Plus applications | | |
|--|--|--|
| Typical project applications | <ul style="list-style-type: none"> - Clearance surveying - Clearance gauging - Structure gauging - Compliance checks of lineside installations - Structure condition assessment | |
| Typical project performance | | |
| Application | Clearance surveying | Variant studies |
| Project section, lengths | 1'000 m | 1'000 m |
| Required point density | 10 x 10 mm | 20 x 20 mm |
| Surveying | | |
| Typical measuring speed *) GRP with total station / **) GRP with GPS | 3.0 km/h | 1.0 km/h*) / 3.0 km/h***) |
| Track occupation | 20 min | 60 min *) / 20 min***) |
| Track geometry data | Stationing, Gauge, Superelevation | Stationing, Gauge, Superelevation 3D track position |
| Analysis | | |
| Working time interactive (operator) / automatic (PC) | 1.5h / 6h | 1.5h / 6h |
| Results | | |
| | 2D clearance map, single cross section | 3D point cloud 3D track axis cross section |
| System approval | | |
| Unlimited electro-magnetic compatibility (PET wheels) | Approved by (extract): Network Rail (UK), Deutsche Bahn (DE), RFI (IT) | |
| Amberg Clearance reference extract | | |
| Ambergs' Clearance solution has proven its high performance all over the world. Demanding projects have been successfully realised e.g. in Great Britain, Germany, France, Switzerland, Slovakia, Spain, Greece, United States, Canada, Japan. | | |

