

Amberg Geotechnics

Datasheet

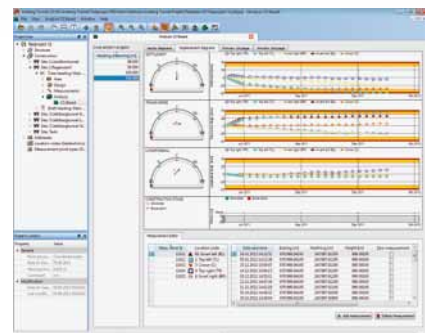
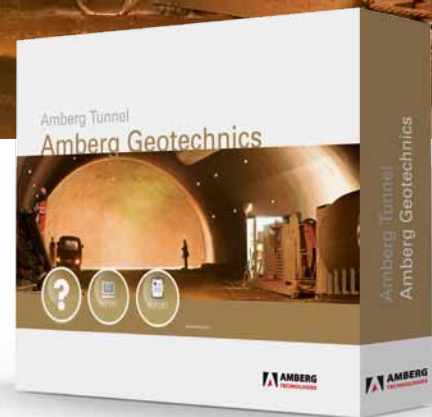


See what's moving – In underground construction and in tunnel maintenance

Amberg Geotechnics – The comprehensive software solution for observing and evaluating deformations and settlements in tunnel construction and operational maintenance.

- Manage several construction stages
- Tunnel definition in 3D
- Multivendor capable data import
- Recognise risks and hazard potentials quickly, clearly and comprehensively
- Display clear and relevant geotechnical evaluations
- Evaluations can be adapted with just a few mouse clicks

More safety for people and infrastructure



Amberg Geotechnics

System overview

Basic functions and features
Software solution based on current Windows technology
Software is intuitive, reliable, user-friendly and attractively designed
Manage construction projects and tunnel maintenance projects in a single system
Comfortable and interactive project data input with direct graphical visualisation
Automatic project data consistency checks on input
Calculate interval points on axis and axis-related point projection for independent project data control
Define several project axes using the elements for horizontal and vertical alignment
Comprehensive project data import support (e.g. Cremer, LandXML, DXF or ASCII)
Flexible use of units (e.g. metres, international and US feet) and display of decimal places for project-specific requirements
Unlimited definition of construction stages using theoretical profiles, section definition und transverse slope elements
Define theoretical profiles vertically or inclined relative to longitudinal profile
DXF import interface for theoretical profiles (e.g. for importing profiles from TMS Office 1.0)
Comprehensive profile editor for simplifying routine tasks (blow-up function, mirroring, etc.)
Support for transition zones between various profile geometries (linear or centroid-based interpolation)
Graphical visualisation of project geometry data in the 3D viewer
Integrated address management for personalised reports (e.g. contractor or client)
Integrated control point management *1)
Amberg Geotechnics supports all underground projects, even with heavily inclined tunnels (e.g. hydropower projects)
In addition to tunnel tubes, Amberg Geotechnics also supports vertical shafts

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Geotechnical functions	Basic	Plus
User-defined, country-specific geotechnical sensors	✓	✓
User-defined units and tolerance limits for optimised import of geotechnical measurement data	✓	✓
User-defined legend texts as a function of the direction of view relative to tunnel heading	✓	✓
Define geotechnical sensors along the tunnel surface in various construction stages	✓	✓
Define geotechnical sensors in boreholes in various construction stages *1)		✓
Position geotechnical points by means of angles and distances relative to profile, axis and station offset, or absolute coordinates	✓	✓
Store data in an SQL database	✓	✓
Automatic data allocation by means of a unique point number	✓	✓
Automatic point allocation via a snap radius to facilitate working without long point numbers	✓	✓
Imported data are traceable and can be deactivated at any time	✓	✓
Documentation of imported data for quality assurance	✓	✓
Interpretation of displacement in relative and absolute modes at the press of a button	✓	✓
Define unlimited geotechnical analyses	✓	✓
Turn measurement sections inactive when no longer in use	✓	✓
Automatic analyse updating	✓	✓
Support for 3D convergence analyses	✓	✓
Support for ID analyses (e.g. load cells, crack meter, temperature sensor, levelling, ...)		✓
Support for distances computed from 3D points		✓
Support for angles computed from 3D points		✓
Support for extensometer evaluation *1)		✓
Support for longitudinal section-based evaluations for 3D convergence points		✓
Support for longitudinal section-based evaluations for ID data		✓
Flexible evaluation settings for project-specific reports	✓	✓
Export geotechnical analyses to PDF, TXT, EXCEL, HTML, JPEG, ...	✓	✓
User-defined ASCII measurement result export for special analyses	✓	✓

*1) Available with the next maintenance release

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