Product Information **Structural engineering**

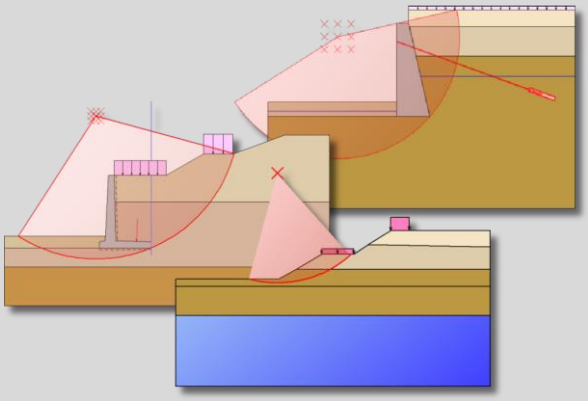
Product Information PB 384 | 11.2018

RTgeo

11.10.730 RTgeo incl. RTlimes, RTslope and RTpinwalls

Collection of Geotechnical Member Design Tools

- **Geotechnical analyses according to DIN incl. EAU & EAB as well as EN 1997 and corresponding national annexes for DE & AT**
- **Clear working environment and program control**
- **Completely graphic-oriented input with optimal control of all changes**
- **Fast and easy editing through sensitive elements and dimension chains**
- **Clear working environment with templates for parameter models**
- **Consistent output of results with free configuration of lists and graphics**



Powerful and versatile program package for the verification of embankments and dams, the design of retaining walls, angled retaining walls and gravity walls as well as underpinnings with easy handling and a graphically interactive input, calculation and output of results.

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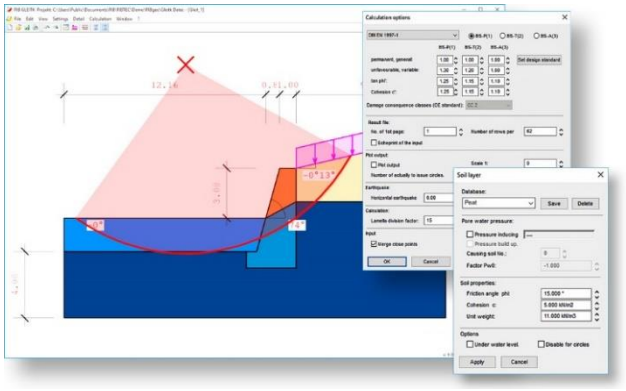
RTgeo Features

Geotechnical program collection under Windows® for geomechanical verifications with an easy operation of graphically interactive input, evaluation and output of results. The collection contains the following individual program applications:

RTslope



Windows® programme with graphically interactive working environment for the input and evaluation of the slope stability analysis according to DIN 4084. The application supports the following functions:

- calculation method according to Bishop
- parameterisable ground level and ground database
- graphically interactive construction supports as well as tabular polygon processing
- polygonal soil profiles with/without support structures
- arbitrarily polygonal limited layers
- soil layers with variable friction, cohesion and specific weight (with/without uplift)
- consideration of soil lenses
- fragments for circularly limited slip surfaces with slice-like volume arrangement
- different variants for friction circle generation
- polygonal water horizons as well as free water level
- consideration of the flow pore water overpressure
- block and large area loads, trapezoidal and triangular loads, line loads with inclination angle
- loads can optionally cause frictions
- consideration of earthquake influence
- analyses according to DIN 1054, DIN 1054-2005 as well as DIN 4084, DIN 4084-100

LIMES

Windows® programme with graphically interactive working environment for the calculation and design of retaining walls, angular retaining walls and gravity walls. The application supports the following functions:

- parameterisable, polygonal ground level and ground database
- graphically interactive construction supports as well as tabular polygon processing
- processing of special forms with free polygon processing
- graphically interactive processing of consoles
- consideration of different earth pressure approaches for the stability analyses
- consideration of the earth pressure, earth pressure on repose, or increased active earth pressure during design
- optionally pre-setting/limitation of the downhill earth resistance

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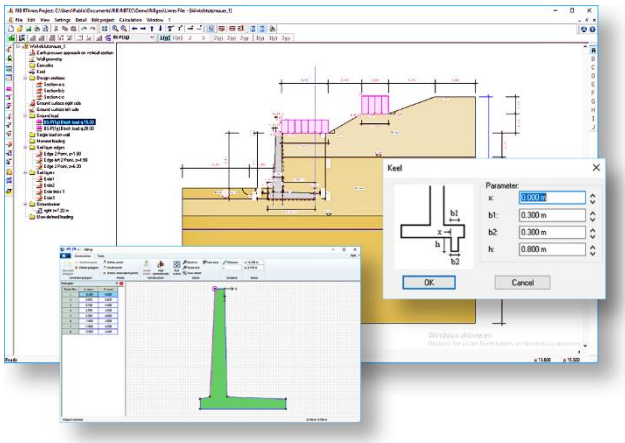
- pre-setting of an effect level for the earth pressure onto a fictive vertical wall, a counter slip surface or the trailing edge of the retaining wall
- different forms of earth pressure redistribution
- automatic and manual generation of design sections



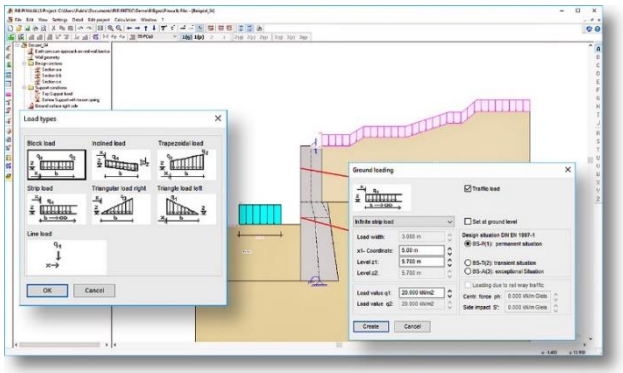
This application contains additional analyses for

- classical earth pressure method or evaluation according to DIN 4085 or DIN 4085-100
- sliding and overtuning safety according to DIN 1054 or DIN 1054:2005
- slope stability according to DIN 4084 or DIN 4084-100 (slice method according to Bishop)
- bearing capacity safety according to DIN 4017 or 4017-2001
- settlement analysis according to the method of DIN 4019 or 4019-100
- analysis of the medium base pressure according to DIN 1054 or DIN 1054:2005
- bending and shear design according to DIN 1045 or DIN 1045-1

PINWALLS

Windows® programme with graphically interactive working environment for the calculation and design of underpinning walls. The application supports the following calculation options:

- parameterisable, polygonal ground levels and ground database
- parameterisable polygonal underpinning cross sections and cross section data-base
- graphically interactive construction supports as well as tabular polygon processing
- processing of special forms including free polygon processing
- earth pressure evaluation out of dead load / surcharge under active, increased active earth pressure and earth pressure on repose
- different forms of earth pressure redistribution according to German guideline EAB
- optionally pre-setting/limitation of the downhill earth resistance
- user-defined earth and water pressures
- consideration of different excavation stages and retreating construction stages with system modifications
- block, strip and line loads on and in the uphill soil profile for each construction stage
- evaluation of the stress resultants, stresses, anchoring forces, deformations and soil pressures
- evaluation of the required anchor lengths from the stability analysis in the deep slide joint
- interactive input of design sections with regular design and/or analysis for plain concrete



The application contains additional analyses for:

- classical earth pressure approach or evaluation according to DIN 4085 or DIN 4085-100
- sliding and tipping safety according to DIN 1054 or DIN 1054:2005
- slope stability according to DIN 4084 or DIN 4084-100 (slice method according to Bishop)
- slope stability according to DIN 4017 or 4017-2001
- settlement analysis according to the method of DIN 4019 or 4019-100
- analysis of the medium base pressure according to DIN 1054 or DIN 1054:2005
- bending and shear design for reinforcement according to DIN 1045 or DIN 1045-1

The output of text and graphics is performed via Windows® service programmes for the static system of the individual program application. If necessary also earth pressures including redistributions, shear force and deformation distribution, as well as friction circle and base failure analysis can be printed.