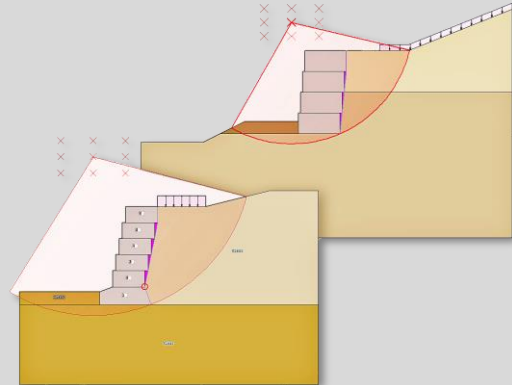


RTgabion

11.10.359 Analysis and design of gabion walls

Analysis and design of gabion walls

- **Proof according to DIN / EN 1997-1 with NAs for DE, AT & CZ/SK**
- **Clear and efficient user interface**
- **Parameterizable, polygonal terrain course and terrain database**
- **Completely graphic-oriented input and workout**
- **Optimum control of all changes**
- **System shapes as segments or polygons**
- **Free choice of loads and water levels**
- **Proof against element failure for individual gabion segments**
- **Clear and complete result output with graphics and preview function**

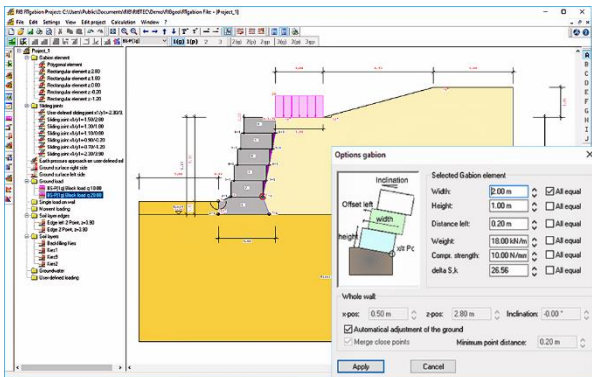


With the RIB program RTgabion, gabion walls can be designed and dimensioned to stabilize terrain jumps. The required proofs of internal and external stability for concrete elements, layered blocks and gabions are kept in accordance with the standard and the German FGSV bulletin and printed out clearly.



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RTgabion Features

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

- geotechnical design according to DIN 1054 incl. EAU and EAB as well as EC 7, EN 1997 and according to national annexes for DE, AT & CZ
- wall design according to DIN 1045, DIN 1045-1, EC2, EN 1992-1 and according to national annexes for DE, AT & CZ/SK
- parameterisable, polygonal ground level and ground database
- simple input of rectangular segments and, if necessary, a sub-polygonal segment
- automatic generation of slide joints at the contact areas of the segments for the analysis of internal stability (sliding and tipping in the slide joints)

- additional, graphically interactive input and processing of slide joints
- processing of gabion special forms with free polygon processing
- graphically interactive construction support, as well as tabular polygon processing
- graphically interactive input and user-defined generation of slide layers for the polygonal described gabion wall
- consideration of different earth pressure approaches for the interior and exterior stability analyses. Consideration of the active earth pressure, earth pressure on repose or increased active earth pressure in the particular analyses
- optionally pre-setting/limitation of the downhill earth resistance
- generation of an effect level for the earth pressure by the user or automatically as an approach onto the staircase-shaped wall trailing edge of the gabion wall e
- different forms of earth pressure redistribution (no redistribution, rectangle, trapezoidal, cascaded formation onto the defined earth pressure level = effect level)
- pre-setting of an uphill and downhill water level for a hydrostatic consideration of water levels
- This application contains the analyses for interior stability in the slide joint at the segment as well as analyses for the exterior stability at the overall wall system.
- basic standard will be DIN 1054 as well as EC 7 and EN 1997-1 and national annexes for DE, AT & CZ/SK
- classical earth pressure approach or evaluation according to DIN 4085 o
- sliding and tipping safety according to DIN 1054 or DIN 1054-1 in both stability analyses

Product Information

- failure of an element according to the analysis for plain concrete within the meaning of DIN 1045, DIN 1045-1, EC2, EN 1992-1 and according to national annexes for DE, AT & CZ/SK and according to the data sheet on support constructions of concrete elements, block layering and gabions (Road and Transportation Research Organisation [FGSV], ed. 2003).
- slope stability according to DIN 4084 and DIN 1054 or DIN 1054-1 (slice method according to Bishop) as a component of the exterior stability.
- bearing capacity safety according to DIN 4017 as a component of the exterior stability
- settlement analysis according to the method of DIN 4019 as a component of the exterior stability
- analysis of the medium base pressure according to DIN 1054 or DIN 1054-1 as a component of the exterior stability

The output of text and graphics is performed via Windows® service programmes for the static system of the gabion wall, earth pressures with redistributions, stability analyses separately according to interior and exterior safety, graphical and numerical force application at each slide joint section with resulting force and eccentric force application and permissible core dimensions, the effective forces for exterior stability including sliding, tipping and base failure as well as slope analysis. Analysis against failure of “plain” elements.

Display of results with the new RTconfig

With the new individual list output, all tabular and graphical results can be output for a specific office. The printout is divided into the static system of gabions, the earth pressures with redistributions, the stability analyses separated in internal and external safety.

Furthermore, the force application is displayed graphically and numerically at each sliding joint section with the resulting force and eccentric force application and permissible core dimension. The effective forces for external stability with proof of sliding, lateral buckling, ground/terrain failure and the failure analysis of the "unreinforced" elements complete the printout.

