

Version 18.0

Build	Module	Description	ID
02.03.18	Timber construction	Additional load case combinations for different load effect times (Kled) for the calculation of the maximum utilization due to Kmod.	12463

Version 17.0

Build	Module	Description	ID
05.04.17	Beam stability	For the lateral torsional buckling analysis according to EN 1993-1-1 (and national annexes) it has to be user-defined, whether the calculation of the interaction coefficients k_{ij} of the girders has to be classified as torsionally rigid (table B.1) or as torsionally flexible (table B.2) structural member. For torsionally rigid structural members the simplification, that for I-beams and hollow cross-sections, which are loaded in compression and uniaxial bending, the coefficient $k_{zy} = 0$ may be assumed is still used.	11199
15.01.17	Ridge rafter	The differentiation between hip rafter and valley rafter is now made via a check box. The rafter loading is calculated via load proportions in dependency of attached purlins for hinged and free of normal force supported jack rafters. The wind loads applied homogeneously, on the safe side, for the main and side roof.	10772

Version 16.0

Build	Module	Description	ID
10.12.16	Timber construction	Is only man load existent instead of other live loads, then the results herefrom are logged as live loads. As hitherto, snow is omitted in the superposition for a decisive man load.	9784
10.12.16	Timber construction	The assignment to the timber type was not correct with the <i>import of older project files</i> , so that the E0,05 value and thus the resulting kc value were not correct.	10709
04.04.16	Continuous beam - Timber	As a consequence of a revision of the hot design, the minimum burn-off was also applied in the cold design for non-softwood.	9761
04.04.16	General	Blanks in the project path are considered correctly, when generating a reinforcement drawing by transferring the ZAC macro to the CAD editor.	9718
26.02.16	Continuous beam - Timber	The dynamic analysis can be carried out according to EN 1995-1 and national annexes.	9641
26.02.16	Masonry	The masonry analysis has been extended with the <i>simplified methods</i> according to DIN 1053-100 and DIN EN 1996-3/NA .	6260
26.02.16	Timber construction	The design of girders made of the timber materials BauBuche GL70 (flat edge and on edge) as well as Kerto-S is now possible.	9683
26.02.16	Timber construction	The structural member dead load can be considered automatically in the timber programs.	9144
26.02.16	Box out design	The stress resultant input in the dialog "Load calculation" was not always transferred correctly.	8977
26.02.16	Masonry	In the dialog input of the dimensions, three decimal places can be entered again.	8722
12.01.16	General	Program modifications for the compatibility with Windows 10 .	9534
12.01.16	General	Generating a reinforcement drawing by exporting the ZAC macro to the CAD program is now carried out with RTviewer by default. The program ZACview is hereby replaced. With an existing installation of ZEICON (from version 15) this CAD system is started automatically.	9458

Version 15.0

Build	Module	Description	ID
29.06.15	Continuous beam - Timber	No bearing stresses were calculated for uplifting loads, which caused irregularities in the result list. It is now provided, that the support can also exist at the top.	8716
29.06.15	Rafter roof	The settings for the wind loading were not completely saved for the standard CSN.	8554
22.01.15	Collar beam roof	The setting "North German Plain" for snow loads was changed to "accidental combination". In addition to the basic combination the analyses for the accidental combination are performed with an increased load factor for snow loads. The load factor is now editable. This additional analysis is now also possible for CZ as well as SK standards.	7975
22.01.15	Continuous beam - Timber	The order of individual actions and sum has been interchanged in the result output of individual actions.	8055
22.01.15	Box out design	In the setting "symmetrical loads", the right value has to be equalized with the left value before averaging.	8306

Version 14.0

Build	Module	Description	ID
28.05.14	Continuous beam - Timber	The continuous beam (timber) has been extended with wind loads.	8000
28.05.14	General	Temporary files are no longer necessary for the licensing query.	7909
28.05.14	Beam stability	The warning message for the input of the ideal lateral torsional buckling moment M_{ki} for hollow profiles has been removed, since no lateral torsional buckling analysis is carried out for this type of profiles.	8007
28.05.14	Beam stability	Since rectangular and round hollow profiles are not at risk for lateral torsional buckling, only flexural buckling is analyzed for those. If an additional bending moment has been entered besides a pressure normal force for these profile types, the line with the flexural buckling analysis was missing in the printout.	7548
28.05.14	Box out design	The results according to Heft 459 are now also displayed in the window "Result preview".	8006
28.05.14	Stress	The specified design standard is being saved and still correct after reopening the file in the <i>Stress analysis - steel</i> .	8061
28.05.14	Stress	The maximum shear stress from torsion is calculated correctly for <i>rectangular and square hollow-profiles</i> according to the 1. Bredt formula in the <i>stress analysis - steel</i> .	8003
28.05.14	Stress	The <i>stress analysis steel</i> for the steel grades <i>S420</i> and <i>S460</i> is possible again without the error message "Calculation program can not be started".	7042
29.03.14	Box out design	The window "Result preview" has been enlarged.	7780
29.03.14	Box out design	The block-out shape "Rectangle/Circle" is now being saved.	7779
29.03.14	Punching	The automatic increase of the longitudinal reinforcement to meet VR_{dmax} according to ÖNorm EN 1992-1-1 has been corrected. 2 values for VR_{dmax} must be met according to ÖNorm, whereupon the longitudinal reinforcement is only considered for one value.	7619
28.01.14	Box out design	Alternatively to the strut-and-tie model according to Heft 399 DAfStb, a design can be performed according to Heft 459 DAfStb. Thereby, it is being distinguished between "small openings" and "large openings" in correspondence to the sections 3 and 4 of Heft 459. The program tries in advance to prove the opening as a "small opening" with a strut-and-tie model according to the pictures 3.2 and 3.3 of Heft 459. If the geometrical requirements are not sufficient or the required strut inclination is not met, the analysis for "large openings" is performed according to the design recommendation in figure 4.31 and 4.32. Since geometrical inadmissibilities can possibly arise for flat (possible and admissible) strut inclinations, the program tries to check for these. In addition, a manual check should be performed close to the supports and for several openings. The strut-and-tie model can hereby be influenced via the specification of a strut inclination.	7463

Build	Module	Description	ID
28.01.14	Stress	The graphical display of the stresses has been adjusted for 1/2 I-sections in the stress analysis steel . As stress value in the transition between flange and web, the value of the flange has been used for the web.	7564
28.01.14	Stress	The calculation of the utilization IAB according to EN 1993-1-1 Gl. (6.1) has been adjusted in the stress analysis steel . The square root from the left side is now used, which corresponds to the usual calculation of the utilization sig_v/sig_Rd.	7563
13.01.14	General	Program maintenance and support	7460
13.01.14	Box out design	The As values were accidentally multiplied by 10000 in the preview for the design of the beam recess.	7320
13.01.14	Concrete section design	Entered strut inclinations are checked for the admissible values in the standard and corrected if necessary.	7321
13.01.14	Purlin roof	A "Man load" according to DIN 1055-3(6.2) / EN 1991-1-1(6.3.4.2) is loaded again and can be edited.	7342

Version 13.0

Build	Module	Description	ID
29.08.13	Beam stability	If the lateral torsional buckling analysis can be omitted, then it is no longer issued.	6976
29.08.13	Beam stability	For the analysis "uniaxial bending without normal force" no analysis has been carried out for the EN 1993-1 standards.	6880
29.08.13	Stress	The shear stresses from torsion were calculated incorrectly for individual section types in the stress analysis for steel construction. Corrections have been made for hollow, tubular, flat and rectangular cross-sections.	7019
04.07.13	Beam stability	Revision of the list output for the interaction analysis <i>Bending and Compression</i> according to EC3, Section 6.3.3.	6792
04.07.13	Continuous beam - Steel	The cause for the error message <i>Error section values</i> (e.g. for cross-sections of the type <i>square hollow section</i>) has been fixed.	6833
04.06.13	Beam stability	According to design standard DIN 18800, the confinement of the deformation thru cross girders, trapezoidal sheeting or masonry can be considered in an additional analysis for bending without normal force. The effective torsional bedding can afterwards be applied manually at the ideal lateral torsional moment.	6716
04.06.13	Beam stability	The output of the analyses according to EN 1993 and all national annexes has been restructured. The new sections are: Stored values flexural buckling, analysis flexural buckling, stored values flexural torsional buckling, analyses flexural torsional buckling and analysis for bending and compression.	6712
04.06.13	Beam stability	The spacing of lateral mountings 'c' can be considered for lateral torsional buckling of I-beams according to DIN 18800. For this, the analysis of the compression flange as strut for I-beams, whose compression flange is fixed in individual points with the spacing 'c', has been extended for uniaxial bending with or without normal force according to DIN 18800 Part 2 Section 3.3.3 Element (310).	6676
04.06.13	Beam stability	The text output for the input selection "centered pressure according to EN1993" has been shortened and the note for the ideal lateral torsional moment has been removed.	6640
04.06.13	Beam stability	In the interaction equations (6.61) and (6.62) of EN 1993, the reduction factor for lateral torsional buckling chiLT is adopted for flexural buckling.	6638
04.06.13	Stress	The factors alpha ply and z for the definition of the plastic section modulus of rectangular hollow sections has been increased to 1.10.	6643
04.06.13	Beam stability	The program no longer terminates, if no beam moments have been entered for the moment distribution (moment coefficient zeta, correction factor kc and moment coefficient Cm).	6641
04.06.13	Beam stability	It is now possible to adopt the correction coefficient kc according to EN 1993-1-1 Table 6.6 from the input.	6639

Build	Module	Description	ID
04.06.13	Beam stability	The ideal lateral torsional moment can be edited.	6606
04.06.13	Console	The note about the distribution of the horizontal stirrups was removed, because different recommendations apply according to Figure J.6a and BK 2007.	6719
04.06.13	Continuous beam - Timber	Missing initialization of the maximum utilization for shear stresses, could sometimes lead to undefined values in the printout.	6681
04.06.13	Stress	The classification according to EN 1993 and all national annexes of the cross-section parts, web and flange, was corrected for all section types.	6703
04.06.13	Stress	The linear distribution of the shear stresses from vertical shear force V_z in the horizontal leg as well as V_y in the vertical leg of the L section has been corrected.	6702
04.06.13	Stress	The distribution of the shear stresses due to horizontal shear force V_y has been changed from linear to parabolic in the result graphic. The shear stresses from the horizontal shear force V_y in the intersection of web and flange of U sections has been revised.	6674
04.06.13	Stress	The classification of the web under compression and bending according to EN 1993 Table 5.2 has been corrected.	6642
24.04.13	Beam stability	The stability analyses have been extended with the corresponding national annexes for the standards of the EN 1993-1-1 , the output of the result list was adjusted to these new analyses.	5729
24.04.13	Concrete section design	The reinforced concrete design is now also possible for reinforcement made from glass fiber reinforced plastic (GFRP) . Available are <i>ComBAR®</i> by SCHÖCK and <i>HFR</i> by HALFEN as new reinforcement material.	6513
24.04.13	Continuous beam - Steel	The stress analyses have been extended with the corresponding national annexes for the standards of the EN 1993-1-1 , the output of the result list was adjusted to these new analyses. The input of the variable actions has been left thereby at the existing format, which corresponds to a simplified superposition of the stress resultants. The radii of the web and flange are now being considered in the analyses.	5728
24.04.13	General	Now, the RTool manual opens via the menu item "Topics".	6605
24.04.13	General	Program modifications for the compatibility with Windows 8 .	6368
24.04.13	Punching	Besides the punching analyses with RTool, the correspondent external design programs from the companies SCHÖCK, HALFEN and JORDAHL can be started in the menu item <i>Static</i> . This requires the installation of the third-party software by the user and possibly the adjustment of the installation paths in the menu item <i>Options External programs</i> .	6507
24.04.13	Rafter	If no cross-section remains in the hot design due to combustion, the utilization is put out as 9.99%.	6337
24.04.13	Rafter	The bottom wind onto the cantilever is now logged in the printout.	6234
24.04.13	Strain	The strain analysis is now also possible for reinforcement made from glass fiber reinforced plastic (GFRP) . Available are <i>ComBAR®</i> by SCHÖCK and <i>HFR</i> by HALFEN as new reinforcement material.	6514
24.04.13	Stress	The stress analyses were extended with the corresponding national annexes for the standards of the EN 1993-1-1 and the output of the result lists has been adjusted to the analyses.	6506
24.04.13	Stress	The analyses were extended with the elastic-plastic method. For EN 1993-1-1 this is done according to section 6.2.1(7) for all cross-section classes based on the linear addition of the utilization levels of the stress resultants N , M_y and M_z . Thus, a graphical display of the stress dependent utilizations is not possible for the elastic-plastic method. There is currently no interaction with shear forces and torsion at the moment!	6505
24.04.13	Stress	The display of the coordinate system at the cross-section was adjusted to the usual display with the view onto the section. The stress resultants for M_z and Q_y have to be entered consequently with reversed signs. When importing existing files this is done internally by the program.	6504
24.04.13	Stress	The radii of the web and flange are now being considered in the analyses. The analysis points for the decisive stresses partly differ thereby from former calculations.	5727