Release Notes
RTcDesign

Version 18.0

Build	Module	Description	ID
13.04.18	User interface	The display of some components in the graphical user-interface has been adjusted, in order to consider the specified scaling in the display settings of the operating system.	12368

Version 17.0

Build	Module	Description	ID
24.08.17	Design	The calculation of the shear force bearing capacity without shear reinforcement VRd,ct in the shear force design of circular cross-sections has been adjusted to the literature recommendations by "Bender + Mark" by applying 0,5*As,tot/Ac for the longitudinal reinforcement ratio. The static effective height d is hereby relating to the tensile force centroid and the value d in eq. (6.2) of the EN is replaced by the inner lever arm z. An increase of the limit load due to compression forces is still calculated via the concrete stress as in eq. (6.2) of the EN.	11739
28.04.17	Design	**Concrete compressive stresses in prestressed components** In the analysis of the concrete compressive stresses of prestressed components, the variance coefficient has been corrected corresponding to the new EN standards.	11291
28.04.17	Design	**Fire protection of slabs** Wide beams with b > 5 x h are treated like slabs from now on.	11276
28.04.17	Design	**Stress-strain curve for reinforcing steel** The steel strain has been limited to 10 ‰ for the limit states of serviceability and fatigue, i.e. the stress-strain curve for reinforcing steel maximally ranges from -10 to +10 ‰.	11275
01.01.17	Design	In the **design of compression members** only the minimum reinforcement is automatically used: • area related • normal force related • structurally depending on the diameter and cross-section dimensions Furthermore, the additional moments are only considered if an eccentricity has been specified.	10727

Version 16.0

Build	Module	Description	ID
24.11.16	General	On computers with high-resolution screens (4K resolution) and preset scaling of the fonts the program could not be started.	10581
02.08.16	Calculation	**Fatigue strength coefficient alfa.cc** The coefficient for the long-term effect onto the concrete compressive strength is assumed according to DIN EN 1992-2 NDP 3.1.6 for the short-term and long-term loadings equally to 0.85 in bridge construction. Up to now, alfa.cc had been set to 1.00 for short-term loadings.	9815
02.08.16	Design	The input of the limiting diameters has not been considered for circular sections.	9994
12.01.16	General	Program modifications for the **compatibility with Windows 10**.	9528
12.01.16	General	For a better correlation of the direction of action of the stress resultants, the coordinate system of the cross-section is displayed in the graphical user interface as well as issued in the result list.	9468
12.01.16	Output document	The graphs in the result list are dimensioned in cm, if the relevant dimension is less than 1m. Are there fractions of cm present in the measure, then the mm value is raised.	9356
12.01.16	User interface	The program terminated when modifying the name of a segment in the object tree.	9344

Version 15.0

Build	Module	Description	ID
09.11.15	Design	The boom reinforcement was missing in the short output for an upstand beam with a bottom boom.	9158
16.04.15	Analyses	The analysis of terminated cracking according to CSN EN is no longer carried out if no stress resultants are existent in the analysis section.	8940
27.02.15	Analyses	The **analysis of the terminated cracking under CSN EN** standards is performed on the basis of the general EN 1992-1-1 again, whereupon the coefficient k3 for the calculation of the crack spacing sr,max is calculated according to a change (2015) in the national annex of the CSN EN.	8814
27.02.15	Design	Exis.w,k, respectively the compression zone height XII, is now logged depending on the decisive stresses in the **detailed printout** for the **terminated cracking**.	8825
27.01.15	User interface	The program expects "Load and restraint action" as type of action for the hydration analysis. Therefore, this setting is set automatically when selecting "Hydration" for the SLS analysis of the initial cracking and is not alterable as long as "Hydration" is selected.	8620
27.01.15	Design	**Ultra high-strength concrete UHC140** Some formats were adjusted due to the longer name.	8560

Version 14.0

Build	Module	Description	ID
07.07.14	Input	Accidental loads were included twice in the combination.	8209
30.04.14	User interface	The buttons for "UNDO / REDO" have been moved to the Quick-Access-Bar at the top of the window analogously to the setup in BEST and FUNDA. Thus, the command is independently from the selected multi-command tab always accessible. Further useful commands (Open, Save, New, Options, Calculate) have been added to the quick access bar. In order to display these correctly, the command "Settings -> Restore standard view" should be used one time after the installation. After the next start of the program the newly arranged toolbar is available.	7377
30.04.14	Design	**Eccentricity for compression members** If the input value of the eccentricity is > 0, this is put up as decisive. It is only checked, whether the minimum eccentricity is adhered to.	7985
30.04.14	Design	**Hydration analysis** For different bar diameters at the top and at the bottom and an equal tensile force to bear, different reinforcement amounts are now calculated.	7920
30.04.14	Design	The program terminated in the design of a slabs when a location unequal to 0 had been entered. Since the input of the location is generally only reasonable for beams, the input of a location has been disabled for slabs.	7918
30.04.14	Input	When generating a new beam member in a project with only area members, the program termination could occur later in the further editing.	7796
30.04.14	Output document	The eccentricity of compression members is now journalized.	7988
30.04.14	User interface	Changes in the settings of the "Bending type" from "uniaxial" to "biaxial" were not saved.	7987
30.04.14	User interface	The selected setting for the initial cracking was not saved.	7925
30.04.14	User interface	The behavior of the command "Restore standard view" has been adapted to FUNDA and BEST. By selecting this command, the standard arrangement of the windows is restored at the next start of the program.	7376
24.01.14	Design	The design in the earthquake situation has been carried out together with the permanent design situation, so that the decisive values were issued as result. In order to be able to evaluate the dues of each action, the design combinations are calculated separately from now on.	7373
24.01.14	User interface	The setting statically determinate / indeterminate is saved and applied correctly in the calculation for glass fiber reinforcement.	7232

Version 13.0

Build	Module	Description	ID
08.10.13	Design	**Tabular fire protection analysis for compression members** - The tabular fire protection analysis has been switched from table 5.2a to equation 5.7 according to DIN EN 1992-1-2; i.e. the minimum dimensions in dependence of the fire resistance class and the utilization level are not being interpolated, but the fire resistance time [min] is calculated directly - More economical results as with table 5.2a can be achieved with the new method. Other tabular methods, e.g. Table 31 according to DIN 1045-1 are hereby not affected. - The documentation has been updated	7151
08.10.13	Output document	An accidental load case was not considered in the calculation of the stress resultants, if only an accidental load without further permanent or live loads was entered in the accidental situation.	7158
08.10.13	Output document	The design results for the earthquake situation are also shown in the overview now.	7155
08.10.13	Output document	User-defined material is now correctly saved and reloaded. For existing projects the user-defined material has to be checked and adjusted if necessary.	7154
18.09.13	Design	**Compression member** The distribution of the minimum reinforcement over the circumference of the cross-section has been corrected.	6966
18.09.13	Design	**Partial safety factors of materials** The partial safety factors of materials in the ULS are provided separately for the permanent, the accidental as well as the earthquake situation. Now, the correct partial safety factors are used depending on the specified situation. The dialog for the material coefficients for concrete and steel has been extended by an input field for the earthquake design situation. For new positions based on the default template of the program, the coefficients for earthquake are now applied with the gamma values of the permanent and the transient situation (cf. NDP 5.2.4(1) and (3)) as regulated in DIN EN 1998-1-1. The coefficients might need to be adjusted via the settings dialog for existing files.	6942
06.06.13	Design	The **Documentation** has been amended and improved.	6540
06.06.13	Design	**Glass fiber reinforcement** Glass fiber reinforced structural elements can be designed. The program currently resorts to 2 manufacturers : **Schöck ComBAR** and **Halfen FiReP REBAR**. The following design analysis can be carried out: • Bending and shear force bearing capactiy • Limitation of the crack width • Limitation of the stresses	6539
06.06.13	Design	**Shear joint bearing capacity** The shear joint analysis has been extended. Now, the shear joint analysis can be carried out for • sectionally build beams; i.e. rectangular beams with in-situ concrete addition • composite trusses, i.e. precast T-beams with in-situ concrete addition • lattice girder, i.e. precast slabs with in-situ concrete addition Inclination angle and material of the tie bars are adjustable. **Fatigue analysis of the tie bars in the shear joint** As of now, a fatigue analysis is performed under dynamic shear force loading.	6512
06.06.13	Design	Now there is only one structural member with one section available in the default template. By default, the standard list is set without attached detailed output.	6334
06.06.13	General	Now, the **release notes** are available in **English**.	6452
06.06.13	General	Program modifications for the **compatibility with Windows 8**.	6363
06.06.13	User interface	Now, for a better lucidity of the user interface, the tab "Section" is activated and the most important groups in the property grid are displayed opened at the start of the program.	6599