

# COLBEAM BSK07 - Update information

## Version 4.4

1. When optimizing profiles including profile deadload, dead load from heaviest profile was included in the load. Error corrected.

## Version 4.3

2. Buckling of thin walled profiles is now based on gross section of moment of inertia, deviation to eq K18:34b in K18, but in accordance with EC3.
3. Perimeter area corrected for HSQ non symmetric profile
4.  $\psi$  for section/bucklingcontrol for tubes corrected
5. Error in Database function corrected
6. Usage Factor (UF) changed to Interaction Ratio (IR)
7. For section control N+My+Mz, control for combination of N+My and N+Mz is added
8. Buckling control of T-profiles corrected

## Version 4.2

9. Program compatible with Windows Vista
10. INP – profile, Ix property corrected
11. Min thickness for all profiles is now 0.1 mm
12. Input in loading table corrected for length below 0 and above profile length
13. New profile added - flatbar

## Version 4.1

1. Calculation correction for point-loaded L-profiles
2. For buckling of L-profiles, slenderness increased only if force is applied at one leg, ref eq K18:35e/f

## Version 4.0

1. Program adjusted for BSK 07, material database updated
2. New profile group: 6 stiffened plated structures implemented
3. New profiles: INP and UNP
4. New profile: T-profile implemented (only axial loading)
5. New profile: Unsymmetrical box profile
6. Reqt VKR profiles now also in size 500x300
7. HP profile is renamed to BF (Bulb flats), ref EN 10067
8. Revised calculation procedure for bulb flats
9. Multy section forms can be opened.
10. Moment and deformation calculation corrected for spring supports with trapezoidal loads

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11. For  $M_z$ , printing corrected (calculation correct)
12. For single symmetric I-profile,  $e_z$  is now defined from top flange
13. Moment and shear is now given at cursor position on diagram as tooltips
14. Allowable usage factor can be given in range 0.3 – 2.0
15. Allowable usage factor and material type can be saved as default values
16. Variable loads can have two different loadfactors
17. Three numbers of trapezoidal loads can now be used
18. For section class 4, local buckling of web/flange can be neglected
19. Modal analysis can be calculated for beams with q-loading
20. Section control of H/I/U/General profiles now always includes N/M/V separate controls
21. Error corrected in  $M_z$ -moment/ $V_y$ -shear calculation
22. Wrong moment/shear/deflection diagram plotted for loading in z-direction if member also was loaded in y-direction
23. Left symbol for free support changed to a circle
24. New input procedure for text boxes
25. Revised printer heading
26. Slenderness calculation for buckling members
27. For welded I/Box profiles, the weld is not taken into account when calculating plate slendernesses/effective widths
28. Possible to open ver 2.5 & 2.5.3 files

## Version 3.5

1. Section control can be made at characteristic points (1-3)
2. Section control also at points with max  $M_y/M_z$
3. Default values can be given (start up-values)
4. x-point where  $M=0$  is given on the moment diagram plots
5. Optimization of database profiles can be based on ULS/SLS or both
6. All section profiles can be drawn in scale.
7. Load level can be given for lateral torsional buckling control
8. Self weight can be included for the profiles
9. More developed load combination
10. Input can be given with both "," and "." as decimal separator
11. Revised load input
12. Revised print out
13. Colours adjusted for Win XP
14. Graphic presentation of 3xP-loads adjusted
15. Program corrected for error when running under Win98
16. M+V section control for section class 3 single symmetric profiles adjusted

## Version 3.0

1. New load – trapezoidal load
2. Loadcombinations – ULS/SLS and all loads have a switch P/V (Permanant/Variable)

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3. Revised calculation of C-factors for buckling.
4. Manual input of C-factors possible for loaded members

## Version 2.0 to 2.5:

1. Possible to take into account effect of flange bending for HSQ-profiles
2. Possible to add loadfactor for loading. The loadfactor is then applied to all loads.
3. Two new database profiles implemented VCKR and KCKR (tubes)
4. Possible to choose default material for database profiles
5. Right mouse click results in a profile menu for easier choice of profile
6. Possible to build up database of welded I-profiles