COLBEAM EC3 - Update information

Version 1.2.6

1. Buckling control of un-symmetric L-profile corrected

Version 1.2.5

1. Buckling of rolled H-profiles and symmetric I-profiles corrected for My+Mz.
2. Bucking of tubes now taking buckling curve based on hot-rolled/cold formed profile
3. Warning for tubes in section class 4. Local buckling is not considered
4. Buckling control of flatbars now also printed
5. Section control for symmetric L-profile corrected
6. Screen adjustments for Win10 and 125 DPI

Version 1.2.3

1. Buckling of un symmetric profiles corrected for N+My.
2. Buckling of symmetric profile with input given to un symmetric profile corrected
3. Update Information available under help

Version 1.2.2

1. Shear capacity Vrzd for beams with slender webs corrected

Version 1.2.1

1. Correction for HSQ-beams, height h. Input is correct and also calculation, but wrong in printout.
2. Mz moment named My in printout.

Version 1.2

1. Include rule updates until july 2014
2. Control for M+V for flatbar corrected if if the shear force is more than 50% of the capacity
3. Results for Eq 6.10a/b when combining buckling and moment corrected so the result is based on max Usage from Eq 6.10a/b
4. Section Class for box profiles corrected for Mz moment.
5. Definition of HSQ-beams changed to be based with h as profile height excluding bottom flange
6. Eq 6.10 added as possible load combination

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7. For HSQ-beams, section class can be upgraded if Class 3 web (Ch 6.2.2.24)
8. German NA included
9. NORSOK added as NA. Only material factors changed compared to Norwegian NA
10. Effective length factor k for lateral torsional buckling is now not changed when the beam support is changed.
11. Lateral torsional buckling is now as default based on ch 6.3.2.3 instead of 6.3.2.2.
12. C-values for calculation of Mcr (lateral torsional buckling) is updated, specially C1-value for beam lateral loaded with fixed/fixed support
13. Lateral torsional buckling is now based on section with absolute max moment. All section properites are taken from this section
14. Calculation of effective section for web plate for un symmetric profiles adjusted if neutral axis is placed in the flange
15. Mz+V for hollow sections, corrected
16. Font on forms changed to Arial

Version 1.1.8

1. RHS data (Ax) corrected for jumbo RHS 500x300x20
2. Buckling correction for L-profiles

Version 1.1.7

1. Buckling with only axial force is now not stopped by the program (Ned>Ncr)

Version 1.1.6

1. Method 1/2 (ref Annex A/B EN 1993-1-1) in setup is now possible to change
2. Method 2 (ref Annex B EN 1993-1-1) calculation correction for tubes
3. Buckling results – correction of printout

Version 1.1.5

1. Calculation for flatbars corrected if Vsd>0.5*Vrd
2. Min dimensions changed from 50 to 20 mm
3. M/V/deflection diagrams also presented if loading is only selfweight

Version 1.1.4

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1. Calculation of Ncr,TF revised and is only considered for profiles when shear centre not coincides with the centroid

Version 1.1.3

1. For single symmetric profiles, misprint of My,Rd value, usage factor is correct

Version 1.1.2

1. Minor correction for section control calculation, for single symmetric profile
2. M,y,Ed renamed in print out to My,Rd and Mz,Ed renamed in print out to Mz,Rd
3. Minor update of HSQ symmetric for effective section of web
4. Reference for section control changed from 6.2.9.3 to 6.2.9
5. Opening a file with different National Annex has missed the annex setup, now corrected

Version 1.1

1. Minor correction for effective section calculations
2. Correction in ch 6.2.9.1 for circular hollow section, EN 1993-1-1:AC:2009 implemented
3. Radius for welded section r = 0.4*tw, min 4 mm based on a minimum a3 weld
4. NcrTF revised calculation for double symmetric profiles
5. CmLT minimised to 1.0
6. λLT0 based om MRk
7. Lateral torsional buckling of flatbars based on general case (ch 6.3.2.2)
8. For single symmetrical profiles, lateral torsional buckling lamdaLt now based on Wy for compression flange (eq 6.56)
9. XLt mod, eq 6.58 in ch 6.3.2.3 now only valid for I-profiles
10. Section class for Boxes/RHS for Mz moment corrected
11. Method 1/2 now possible to change also if NA is chosen
12. Ch 6.3.1.2 (4) now only valid for only axial-load (N)
13. The program will now not reduce Ned if Ned > Ncr. The calculation is stopped and the user has to increase the profile size or reduce the load
14. Non-symmetric I-profile can now be loaded with N+My+Mz
15. Stiffened plated structures added (5 section types)
16. Lateral torsional buckling of flatbars corrected
17. Direct link to homepage/E-mail from About form
18. Download program from homepage

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Version 1.0.6

1. C1, Calculation Corrected for tube calculation with My+Mz
2. C2, Calculation Corrected for non-symmetric box profile
3. C3, Calculation Corrected for general profile
4. C4, Mc,y,Rd renamed in print out to My,Rd and Mc,z,Rd renamed in print out to Mz,Rd
5. C5, Basic capacities Vpl,y,Rd/ Vpl,z,Rd changed to Vc,y,Rd/ Vc,z,Rd
6. C6, Minor corrections

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Version 1.0.3

- C1, Profile shear capacity is printed on screen and printer as the value used in the section control
- C2, If “Web buckling not taken into account” is chosen on setup form, this is also taken into account for shear capacity
- C3, Saving of setup data now works
- C4, printout updated
- C5, printout now works for lateral torsional buckling if axial force is 0
- C6, Load on HSQ flange corrected
- C7, lateral torsional buckling for British profiles added
- C8, Cross Section Class 1-2: Elastic design from setup – correction
- C9, L-profiles – correction of section control