

Colbeam EC3 - Update information

Version 1.3.2 – feb 2026

1. Correction for calculation of equivalent moment factors C_{my} , C_{mz} and C_{m1t} . Valid for members with endforces

Version 1.3.1

1. Correction for INP lateral torsional buckling control
2. Limits for deformation control can now be given for both y- and z-axis

Version 1.3.0

1. If input fil (*.cec) is associated with the program, double click on the input file will open the program and read the file.
2. Buckling control of tubes updated so section class M_y , M_z is equal to section class N. k_{yy} , k_{yz} , k_{zz} and k_{zy} could before be taken from wrong column in appendix A1.
3. Non symmetric box profile in section class 4, minor correction
4. New L-profiles: L120x120x12, L250x250x18
5. New CFRHS: 200x100x12.5, 250x150x16, 300x100x10
6. New CFSHS: 150x150x12.5, 200x200x16, 250x250x16, 300x300x16, 400x400x10, 400x400x12.5
7. Eq 6.10a updated for Swedish NA annex given in EKS11
8. Effective sections for hollow profiles are now based on internal radius for slenderness calculations. Earlier calculation was conservative.
9. For welded profiles and stiffened plates, the weld leg length is now assumed to be 0.5t for calculating effective sections.
10. Calculation of vortex shedding for square and circular members is now included
11. Material and profile data are now saved under C:\ProgramData\StruProg 2020\ColBeam EC3\
12. Program installation under “StruProg 2020”

Version 1.2.6

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

Version 1.2.5

1. Buckling of rolled H-profiles and symmetric I-profiles corrected for M_y+M_z .
2. Buckling 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

Colbeam EC3 - Update information

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 V_{rzd} 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
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 M_{cr} (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 properties are taken from this section

Colbeam EC3 - Update information

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 (A_x) 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 ($N_{ed} > N_{cr}$)

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 $V_{sd} > 0.5 \cdot V_{rd}$
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

1. Calculation of $N_{cr,TF}$ 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 M_y, R_d value, usage factor is correct

Version 1.1.2

StruProg

www.struprog.se

Colbeam EC3 - Update information

1. Minor correction for section control calculation, for single symmetric profile
2. M_y, E_d renamed in print out to M_y, R_d and M_z, E_d renamed in print out to M_z, R_d
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 $r = 0.4 \cdot t_w$, min 4 mm based on a minimum a3 weld
4. N_{crTF} revised calculation for double symmetric profiles
5. C_{mLT} minimised to 1.0
6. λ_{LT0} based on M_{Rk}
7. Lateral torsional buckling of flatbars based on general case (ch 6.3.2.2)
8. For single symmetrical profiles, lateral torsional buckling λ_{mLT} now based on W_y for compression flange (eq 6.56)
9. X_{LT} mod, eq 6.58 in ch 6.3.2.3 now only valid for I-profiles
10. Section class for Boxes/RHS for M_z 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 N_{ed} if $N_{ed} > N_{cr}$. 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 $N+M_y+M_z$
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

Version 1.0.6

1. C1, Calculation Corrected for tube calculation with M_y+M_z
2. C2, Calculation Corrected for non-symmetric box profile
3. C3, Calculation Corrected for general profile
4. C4, M_c, y, R_d renamed in print out to M_y, R_d and M_c, z, R_d renamed in print out to M_z, R_d
5. C5, Basic capacities $V_{pl, y, R_d} / V_{pl, z, R_d}$ changed to $V_{c, y, R_d} / V_{c, z, R_d}$

Colbeam EC3 - Update information

6. C6, Minor corrections

Colbeam EC3 - Update information

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