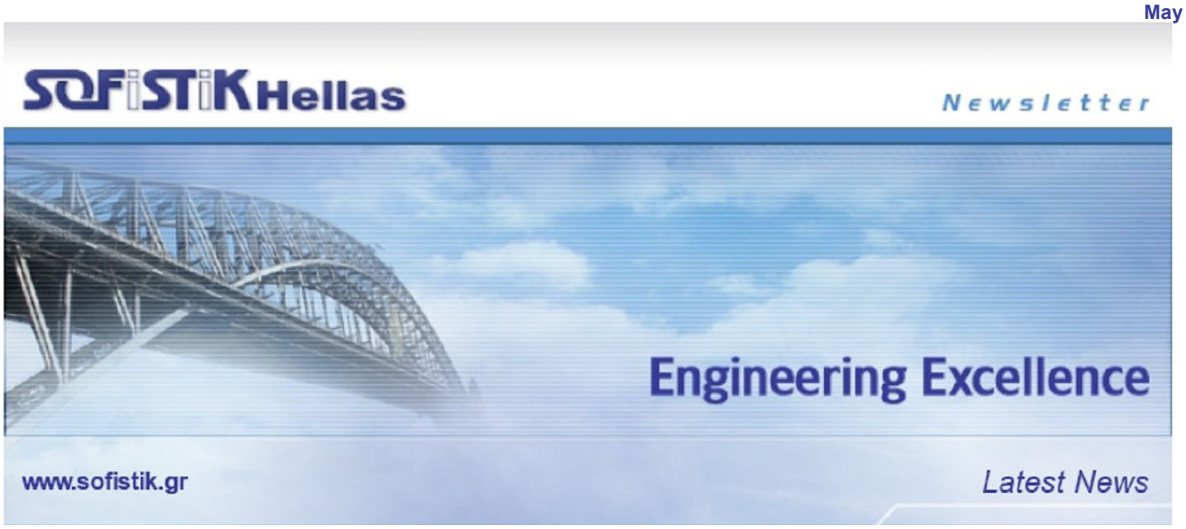


http://www.sofistik.gr/

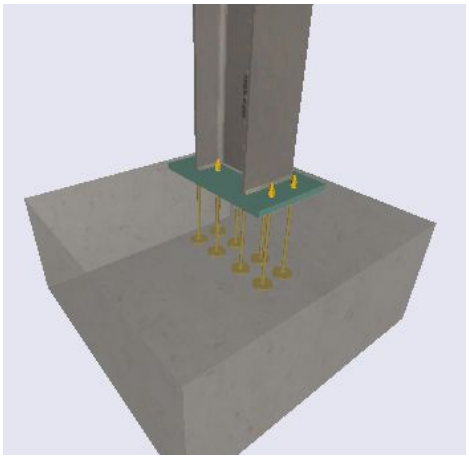
Steel Structures

New version of program STeelCON 2018.068

Dear colleagues,

A new version of the "**STeel CONnections**" program for the design of bolted and welded steel connections has been released.

New Anchorage Calculations for Footing Plate Connection



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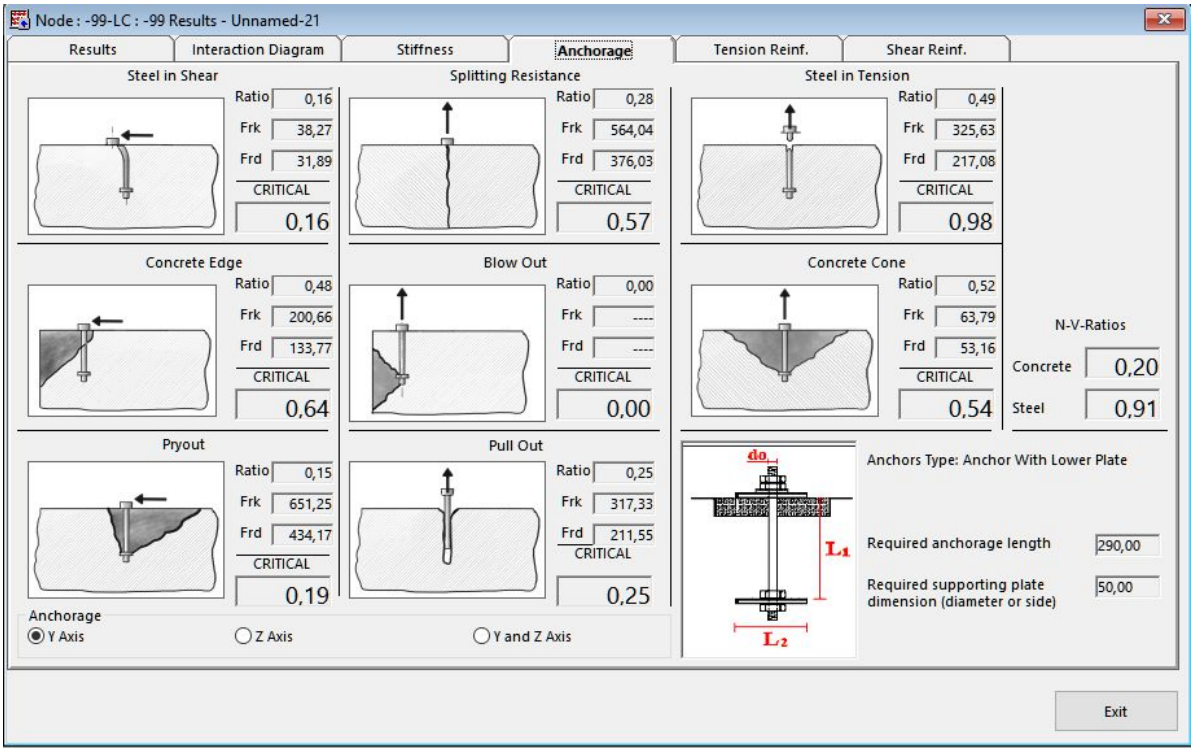
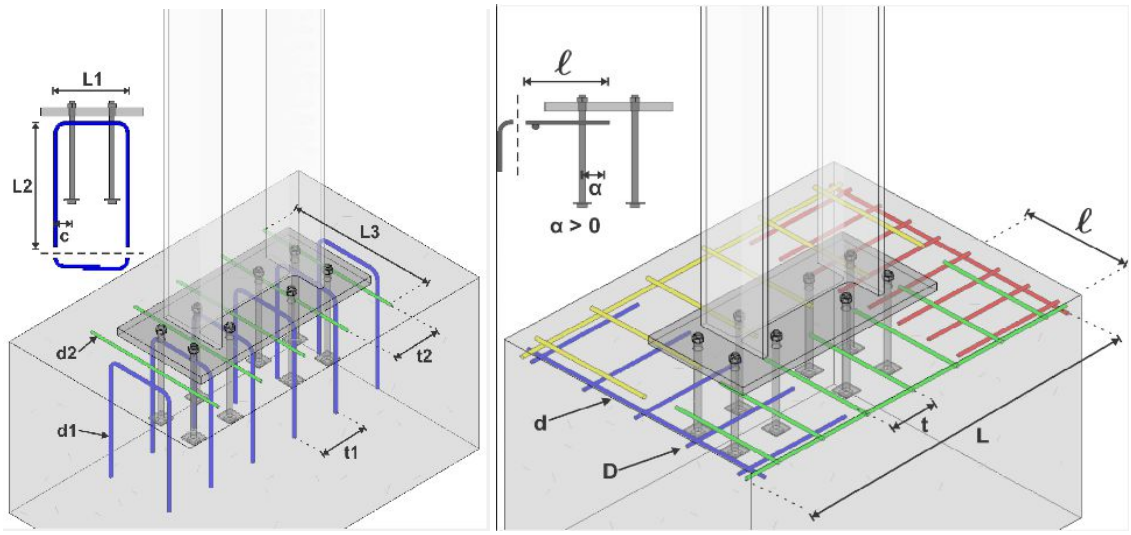
In Steel Structures the height of the foundation is often too small for a proper embedment length of the anchors. In this case we must use headed anchors that decrease the anchor length significantly. The program performs all the checks that are demanded by the Eurocodes.



These checks are very hard to nearly impossible to be met without using any supplementary reinforcements. In this new version of the program, the user is able to calculate the additional tension or shear reinforcement bars in order to not allow concrete crack lines to be formed.



All the calculations are based in Eurocode standards, and the loadings can be applied to both, major and minor axes, as was in the previous version.

The printouts are in full detail, containing formulas and intermediate results to ensure that the calculations are well documented.

Action to resistance ratio for pull-out failure, β_N,p

Reference: B.3.3.4[?]

$$\beta\_N = \frac{N\_Ed}{N\_Rd} \le 1 \quad \beta\_V = \frac{V\_Ed}{V\_Rd} \le 1 \quad \beta\_N + \beta\_V \le 1 \qquad \text{(B.11 - B.13[?])}$$

Parameters:

Action to resistance ratio for cone failure, β_N,c	0.13
Action to resistance ratio for splitting failure, β_N,sp	0.25
Action to resistance ratio for blow-out failure, β_N,cb	0.15
Action to resistance ratio for edge failure, β_V,c	0.00
Action to resistance ratio for pry-out failure, β_N,cp	0.07
Maximum action to resistance ratio for tensile failures, β_N	0.02

Maximum action to resistance ratio for shear failures, β_V **= 0.25**
Tension-shear interaction ratio, β_NV **= 0.07**
No true biaxial action **= 0.33**
Verification : $0.33 \le 1.00$ ✓

04.04.2018, Munich Germany

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