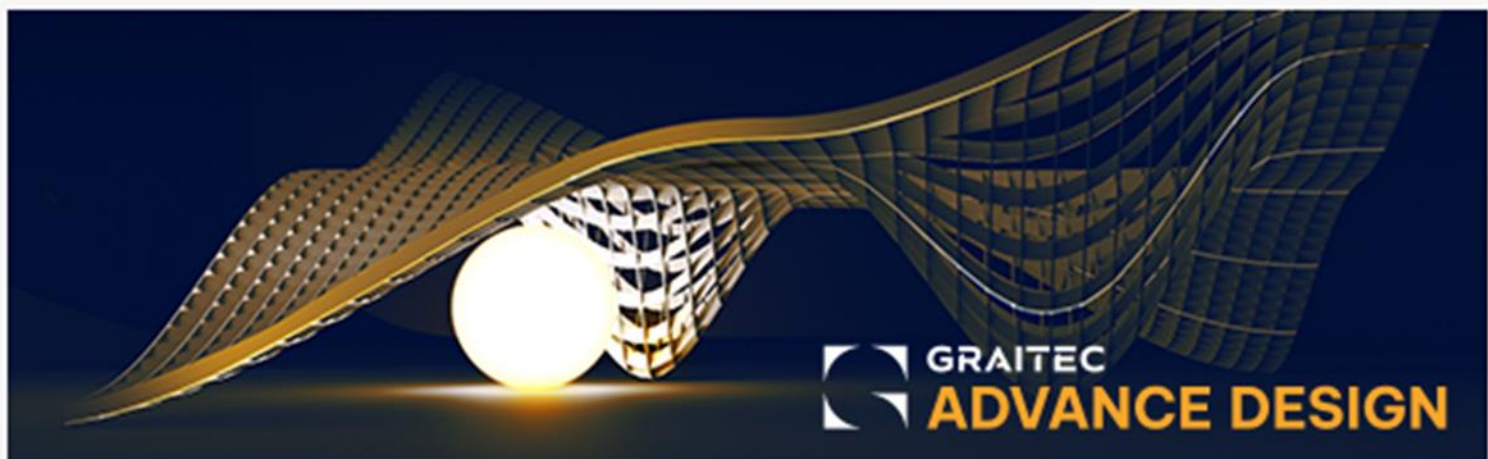




What's New

in Advance Design 2023.1.1



Improvements and corrections

The **Hotfix 1** to Advance Design 2023.1 includes the following improvements and corrections:

General

- Correction of the problem of occasionally occurring unexpected program termination when generating a report in a model containing results of nonlinear calculations.

Steel design

- The stability interaction formula, used for the combined axial compression and bending check during the lateral-torsional buckling analysis of cold-formed profiles according to Eurocode 3, has been modified and now also considers the influence of the M_z .

Bending and Axial Compression (6.2.5)	Case no 101 : 1x[1 L], Mesh No. 1.3 1/4 Cross section : Class 4 $\frac{N_{Ed}}{N_{b,Rd}} ^{0.8} + \frac{M_{y,Ed} + \Delta M_{y,Ed}}{M_{yb,Rd}} ^{0.8} + \frac{M_{z,Ed} + \Delta M_{z,Ed}}{M_{zc,Rd}} ^{0.8} < 1$ $\frac{-0.25 \text{ kN}}{237.87 \text{ kN}} ^{0.8} + \frac{-3.09 \text{ kN}^*\text{m} + 0.007 \text{ kN}^*\text{m}}{30.04 \text{ kN}^*\text{m}} ^{0.8} + \frac{3.09 \text{ kN}^*\text{m} + 0.00 \text{ kN}^*\text{m}}{11.77 \text{ kN}^*\text{m}} ^{0.8} < 1$ Eccentricity favorable effects are ignored. (51 %)
--	--

- When determining analytically the M_{cr} for the lateral-torsional buckling analysis of cold-formed profiles according to Eurocode 3, the coefficients C1, C2, and C3 from Annex I of EN 1999 are now used. In addition, in the case of a non-symmetrical section, a warning is displayed stating that M_{cr} cannot be determined using the analytical formula.
- On the shape sheet report for cold-formed profiles calculated according to Eurocode 3, the part related to the lateral-torsional buckling has been expanded with additional parameters used during verification.

Lateral-torsional Buckling (6.2.4)	Case no 101 : 1x[1 L], Mesh No. 1.3 2/4 Cross section : Class 4 Lateral-torsional buckling effects may be ignored due to $\lambda_{bar_LT} \leq 0.20$ or $\frac{M_{y,Ed}}{M_{Cr,y}} \leq 0.04$ $0.61 \leq 0.20 \text{ or } \frac{-3.12 \text{ kN}^*\text{m}}{97.94 \text{ kN}^*\text{m}} \leq 0.04$ <hr/> $k_z = 1.00, k_w = 1.00, k_{wt} = 4.10, \psi_f = -1.00,$ $C1 = 1.13, C2 = 0.33, C3 = 0.92, L_{cr} = 5.00 \text{ m},$ $z_g = 0.00 \text{ cm}, M_{cr} = 97.94 \text{ kN}^*\text{m}, \lambda_{bar_LT} = 0.61, \chi = 0.83$ M_{cr} was computed analytically. (10 %)
---------------------------------------	--