

# Scia Engineer Fact Sheet



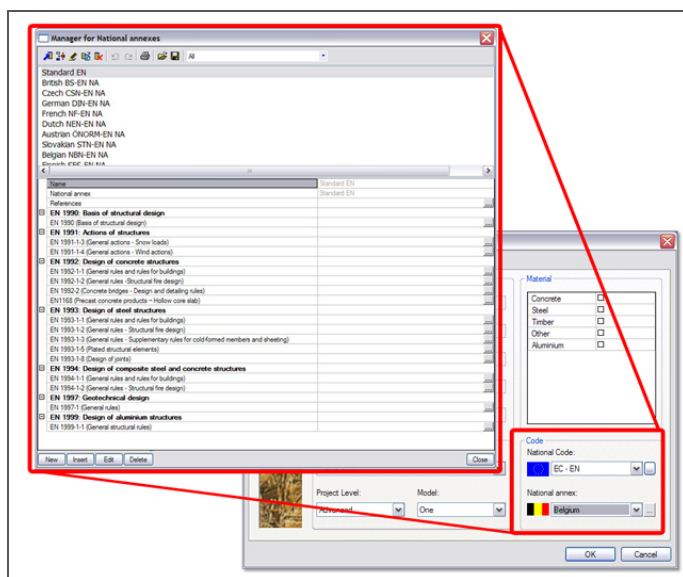
## Eurocodes in Scia Engineer



With more than 30 years of experience with the Eurocodes, Scia Engineer includes numerous functionalities, methods and references, prescribed by these standards. The design according to the Eurocodes in Scia Engineer extends through multiple program modules, most of which are dedicated to a particular Eurocode part. Most modules allow for nationally determined parameters. For companies active on an international market, the integration of nearly all national annexes in one software platform is clearly a cost-related and technical benefit.

Scia Engineer enables the engineer to use a broad range of construction materials, perform section, member and connection checks, and use other design methods available in the different Eurocode parts. All functionality is integrated into one software platform, which means combining different materials and material-specific Eurocode checks in one project is also possible.

Besides the implementation of the Eurocode methodology, Scia Engineer contains a library of national annexes where country-specific methods and parameters are available. The Manager for National Annexes allows the user to verify and adapt nationally determined parameters.



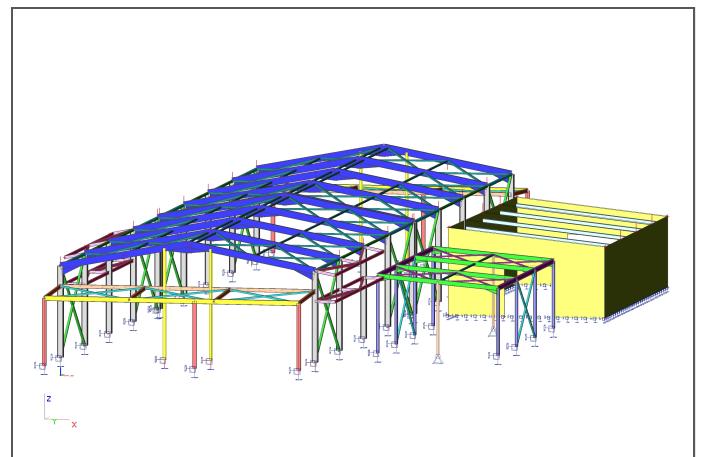
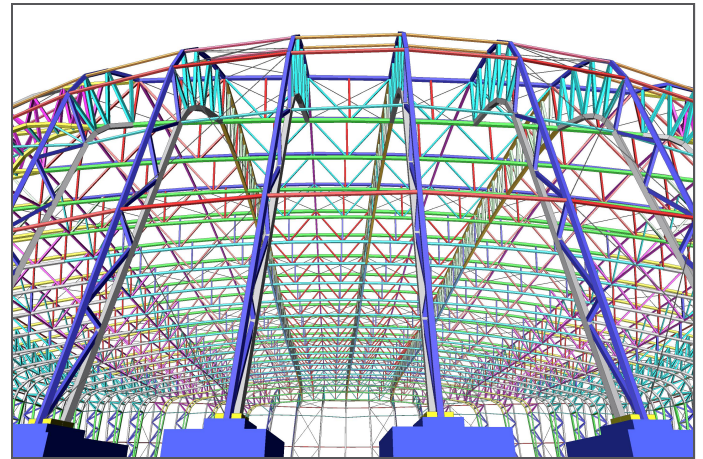
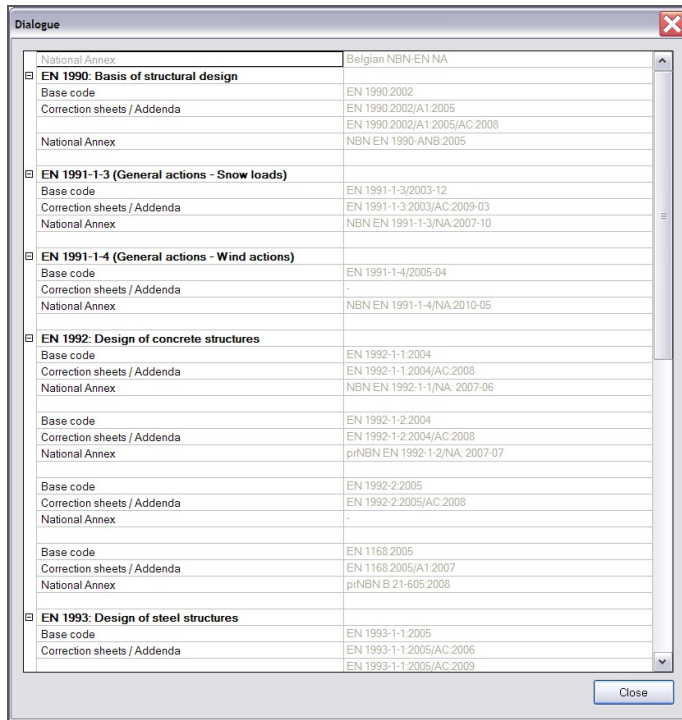
## Features:

- Automatic generation of building and bridge combinations according to EN 1990
- Automatic generation of snow and wind loads on structures according to EN 1991-1-3 and EN 1991-1-4. A 3D wind generator makes it possible to generate wind loads with ease on buildings with defined outer surface
- Comprehensive tool for design and checks of concrete structures according to EN 1992-1-1. Prestressed and non-prestressed concrete beams, columns, slabs (including hollow core and voided (biaxial) slabs) are supported
- Check of fire resistance of beams, columns and hollow core slabs according to the general rules and simplified methods as defined in EN 1992-1-2
- Design rules and detailing provisions for prestressed and reinforced concrete bridges according to EN 1992-2
- Checks for hollow core slabs EN 1168
- Cross section and stability analysis of steel structures according to EN 1993-1-1 including the possibility of optimisation
- Cross section and stability verification of steel members under fire in the resistance domain or in the temperature domain, according to EN 1993-1-2
- Integrated input and check of cellular beams in line with ENV 1993-1-1
- Cold-formed steel design according to EN 1993-1-3
- Analysis of steel structures with plastic hinges
- Checks and verification of bolted, welded and hinged steel frame connections according to EN 1993-1-8
- Design of composite beams in the construction non-composite stage (according to EN 1993) and in the final composite stage (according to EN 1994)
- Design checks of composite columns, based on the simplified method of design (applicable to prismatic columns with doubly symmetric sections) according to EN 1994-1-1
- Fire resistance calculation of composite columns based on EN 1994-1-2
- ULS and SLS checks of solid and glued laminated timber structures according to EN 1995-1-1, including autodesign for optimisation of the timber section
- Masonry material definition including EC6 related properties
- Stability check of pad foundations according to EN 1997-1
- Seismic analysis based on the response spectrum method using CQC or SRSS modal superposition

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- Design, checking and strengthening of reinforced concrete and masonry buildings according to EC8
- Complete solution for EC9 design of aluminium structures, including design of transverse welds, slenderness, local and bow imperfections
- Scaffolding check according to EN 12811-1



## Advantages of Scia Engineer in the design according to the Eurocodes

- Long experience in Eurocode implementation
- Profound implementation of the Eurocode methods, including propositions for alternatives
- Implementation of the majority of the Eurocode articles
- Objective set at support for all Eurocode parts in the near future
- Emphasis on advanced checks and analysis methods described in the Eurocodes
- Design conforming to National Annexes supported for 15 countries
- Software continuously updated in line with developments in the Eurocodes: e.g. correction sheets & National Annexes
- Full integration of all Eurocode modules into one software platform
- Scia Engineer evaluated by CTICM for Eurocode 3 design
- Quality of results guaranteed by daily verified benchmarks

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