FIN EC

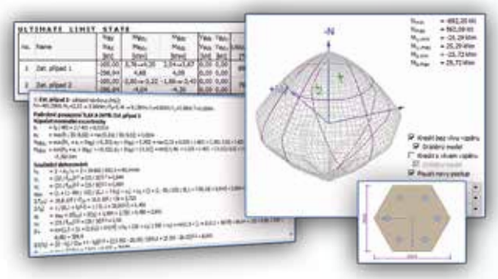
What makes FIN EC unique?

Wide Range of Programs

FIN EC consists of programs for analysis of frame structures using the finite element method and complete structural design of individual elements or details.

User-Friendly Interface

FIN EC consists of individual programs with unified user interface. The programs are designed to copy the methods used in hand calculations, which makes them easy to use without requiring any special training.

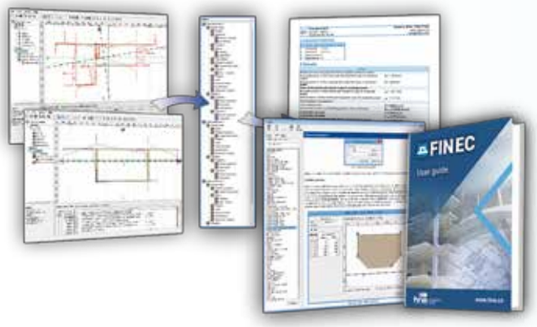


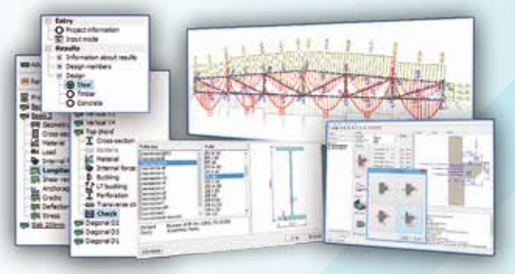
Verifiable Calculations

The remarks of FIN EC programs are the clear and controllable methods of analysis, which can be printed out including all input values. The user can easily verify the applicability of the analysis and calculation validity in non-standard situations. If possible, the analytical methods are preferred to solutions using FEM, because of their controllability.

BIM Support, Connection With Other Programs

FIN EC programs support the IFC format for information exchange in a structure design and building information modeling (BIM). Thanks to the advanced import capabilities of inner forces, it is easy to assess projects created in other structural programs.



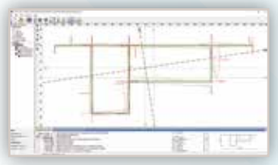


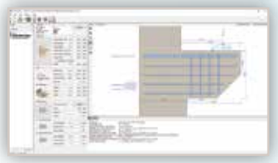
Contextual Help and Engineering Manuals

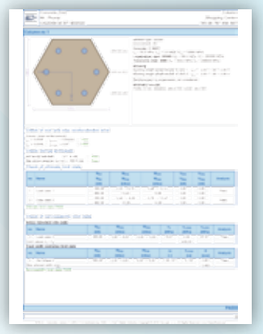
FIN EC software is easy to use and does not require any special training. However, we offer contextual help, that can be accessed directly from the program by pressing the F1 key.
Engineering manuals are also available for easy understanding of the workflow of the programs.

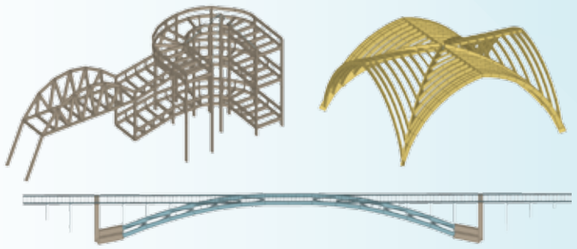
Comprehensive Outputs

FIN EC programs generate clear texts and graphical outputs that always correspond to the current status of the project. Multi-page text documentation of a structural analysis can be easily customized according to the user needs (add company logo, insert images).
The one-page graphical outputs can be used for a brief input presentation or for completing the final documentation of a structural analysis.









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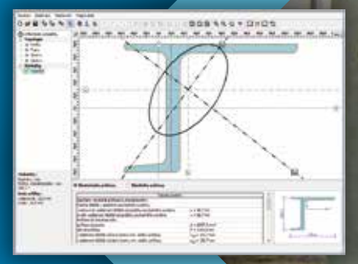
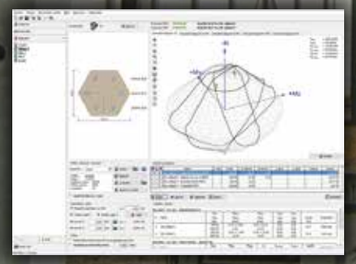
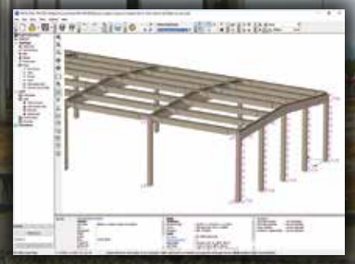
FIN EC

Design and Verification Programs According to Eurocode

- Structural Analysis (FEM)
- Designing programs
- Structural details
- Fire Resistance
- Loading
- Cross-sections







using FE and Analytical Methods

FIN EC

Structural Design Software

FIN EC contains programs for analysis of frame structures using the finite element method (FEM) and structural design of individual elements or details.

- Wide range of programs
- User-Friendly interface
- Clear and controllable methods of analysis
- Easy creation of output reports
- Context help and manuals
- BIM support (IFC format)

FEM programs for static calculations

Calculation of internal forces in frame and lattice structures with verification in dimensioning programs.

FIN 3D **FIN 2D**

Structural analysis programs for calculation of internal forces and deformations of spatial (FIN 3D) and planar (FIN 2D) truss and frame structures by FEM. The programs are characterized by a simple user interface and easy operation. In addition to the basic calculation of internal forces and deformations, these programs can be used to solve complex problems (linear stability, dynamic calculations and calculations according to the 2nd order theory).

Dimensioning programs

Simple programs for easy verification of components that can be used alone or in cooperation with FIN 2D / 3D.

Concrete

The program for verification of reinforced concrete cross-sections of any shape under action of combinations of forces and bending moments. The analysis is performed according to EN 1992-1-1 and EN 1992-2 (Eurocode 2). The program can work as a standalone application or verification module in programs FIN 2D and FIN 3D.

Concrete Beam

The program for design and verification of horizontal reinforced concrete structures according to EN 1992-1-1 or EN 1992-2 (Eurocode 2). This tool is useful for design of beams, slabs and similar structural elements. The verification includes both ultimate and serviceability limit states. The program can work as a standalone application or verification module in programs FIN 2D and FIN 3D.

Steel

The program for design of steel cross-sections and members according to EN 1993-1-1 and EN 1993-1-4 (Eurocode 3). The program can work as a standalone application or verification module in programs FIN 2D and FIN 3D.

Timber

The program for design of timber cross-sections and members according to EN 1995-1-1 (Eurocode 5). The program can work as a standalone application or verification module in programs FIN 2D and FIN 3D.

Masonry

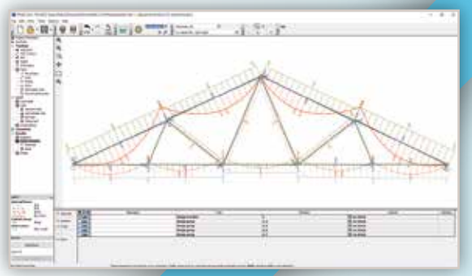
The program for verification of masonry structures according to EN 1996-1-1. The program is able to verify both masonry walls and columns.

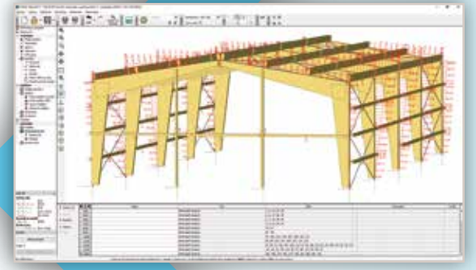
Loading

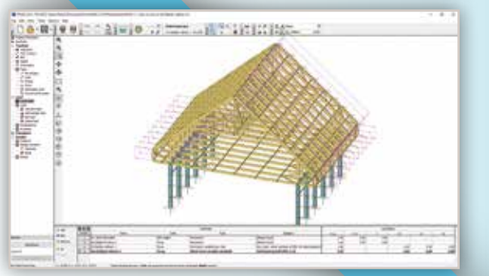
Determination of load on building structures.

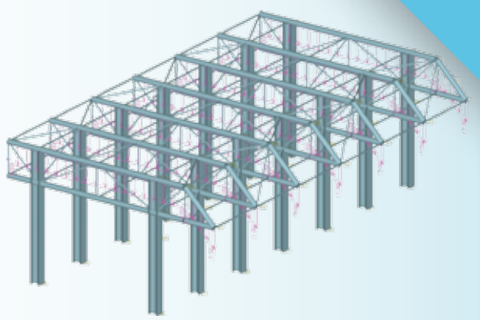
Loading

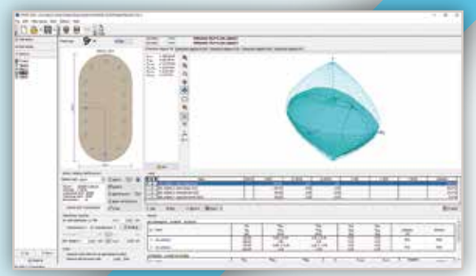
The program for generation of load reports according to EN 1991-1-1, EN 1991-1-3 and EN 1991-1-4 (Eurocode 1). Self weight, imposed, snow and wind loads may be included in the protocols.

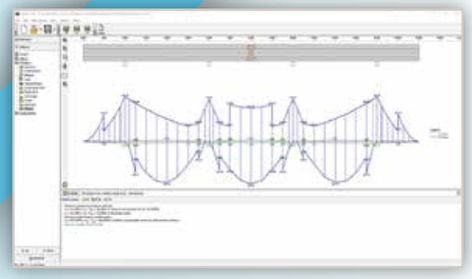


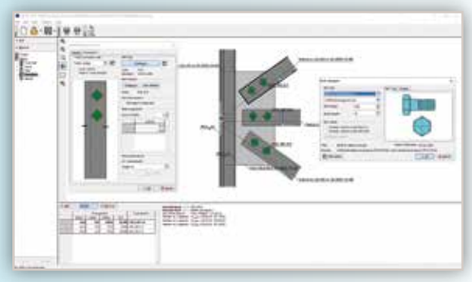


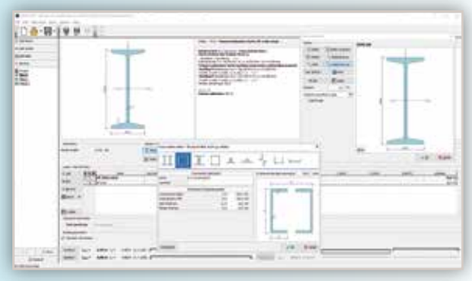












Construction details

The programs are designed to verify the most common structural details of steel and concrete structures.

Steel Connection

The program for design and verification of steel connections according to EN 1993-1-8 (Eurocode 3). The program is based on analytical methods and supports variety of details like end plates, fin plates, truss joints and column bases.

Punching

The program for verification of punching shear resistance of concrete slabs according to EN 1992-1-1 and EN 1992-2. The program is able to analyse both plain and reinforced concrete structures.

Corbel

The program for check of directly supported (corbels on columns) and indirectly supported (corbels on beams) corbels according to EN 1992-1-1 or EN 1992-2. The strut-and-tie models given in EC2 are used for the analysis. It provides minimum areas of the main tensile reinforcement and vertical and horizontal stirrups.

Fire Resistance

Verification of fire resistance for steel, concrete and timber. structures

Cocrete Fire

The program for verification of fire resistance of reinforced concrete cross-sections EN 1992-1-2 (Eurocode 2). It provides 3D interaction diagram for given fire resistance and fire exposure detail. The program can work as a standalone application or verification module in programs FIN 2D and FIN 3D.

Steel Fire

The program for fire resistance verification of steel cross-sections and members according to EN 1993-1-2 (Eurocode 3). The program can work as a standalone application or verification module in programs FIN 2D and FIN 3D.

Timber Fire

The program for fire resistance verification of timber cross-sections and members according to EN 1995-1-2 (Eurocode 5). The program can work as a standalone application or verification module in programs FIN 2D and FIN 3D.

Heat Transfer

The program for calculation of gas and steel temperatures during the fire. The temperatures are calculated according to a selected temperature curve and fire protection detail.

Parametric Temperature Curve

The program for calculation of parametric temperature curve according to EN 1991-1-2. The parameters are calculated according to the specified fire compartment geometry and fire load.

Cross-sections

Determination of cross-sectional characteristics for both simple and complex cross-sections.

Section

The program for calculation of cross-sectional characteristics of arbitrary cross-sections. Both different shapes and materials can be combined in the software.

Sector

The program for calculation of basic and torsional cross-sectional characteristics of thin-walled cross-sections. It provides inputs necessary for warping torsion analysis.