

FWT

Trusses Timber/Steel

The FWT application is suitable for the structural calculation and design of latticed timber and steel girders and trusses typical in portal frame construction:

- Parallel chord truss
- Double-pitch roof truss
- Single-pitch roof truss
- Hip truss
- Double-pitch hip truss

Continuous chords can be taken into account as rigid bars.

Deflection is calculated in accordance with the strut-and-tie theory.

Loading (actions)

- Permanent loading on top and bottom chord
- Live load on top chord
- Wind and snow loads are either generated automatically or defined by the user. Accidental snow loads (e.g. in snow rich areas) can be taken into account too.

Verifications

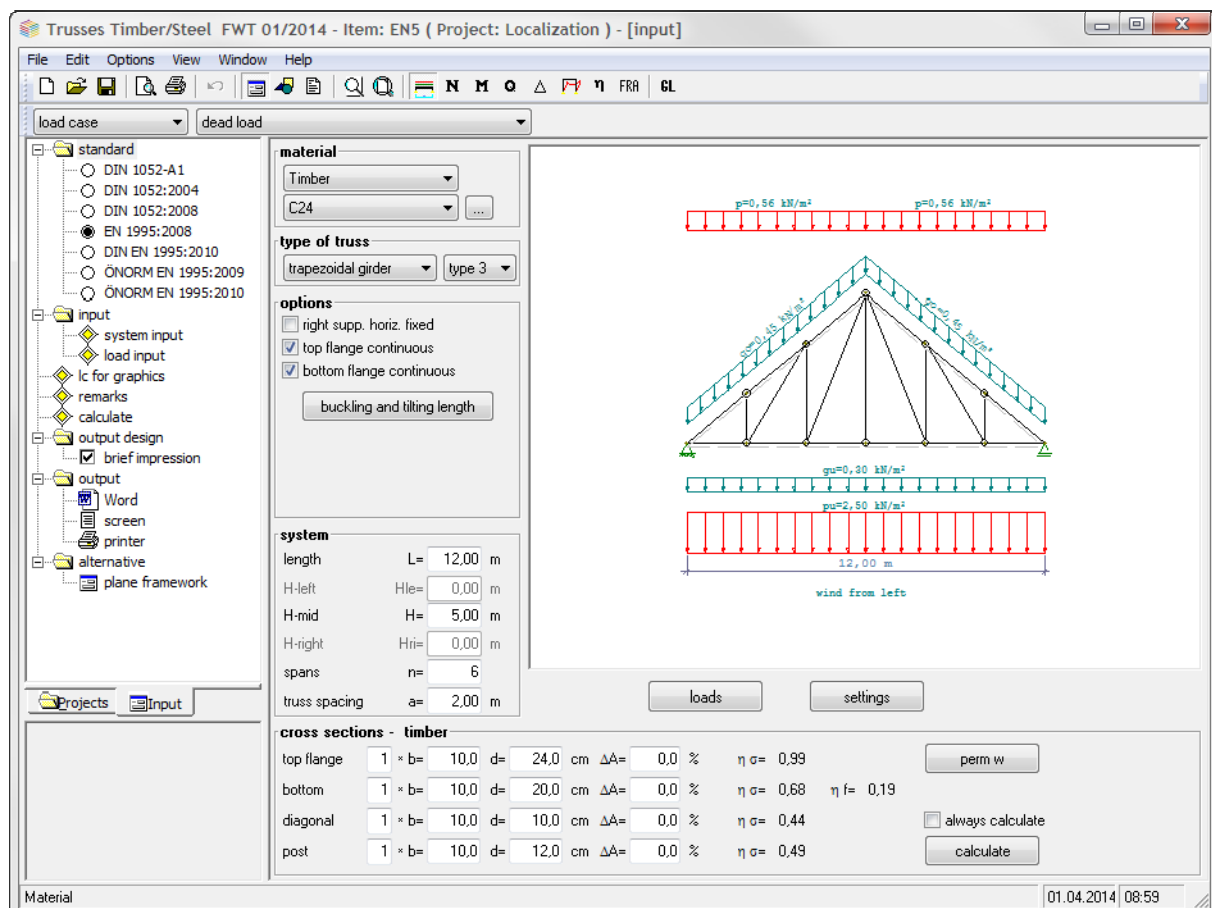
The load case combinations are generated in accordance with DIN 1055 or EN 1990 in combination with the corresponding National Annexes.

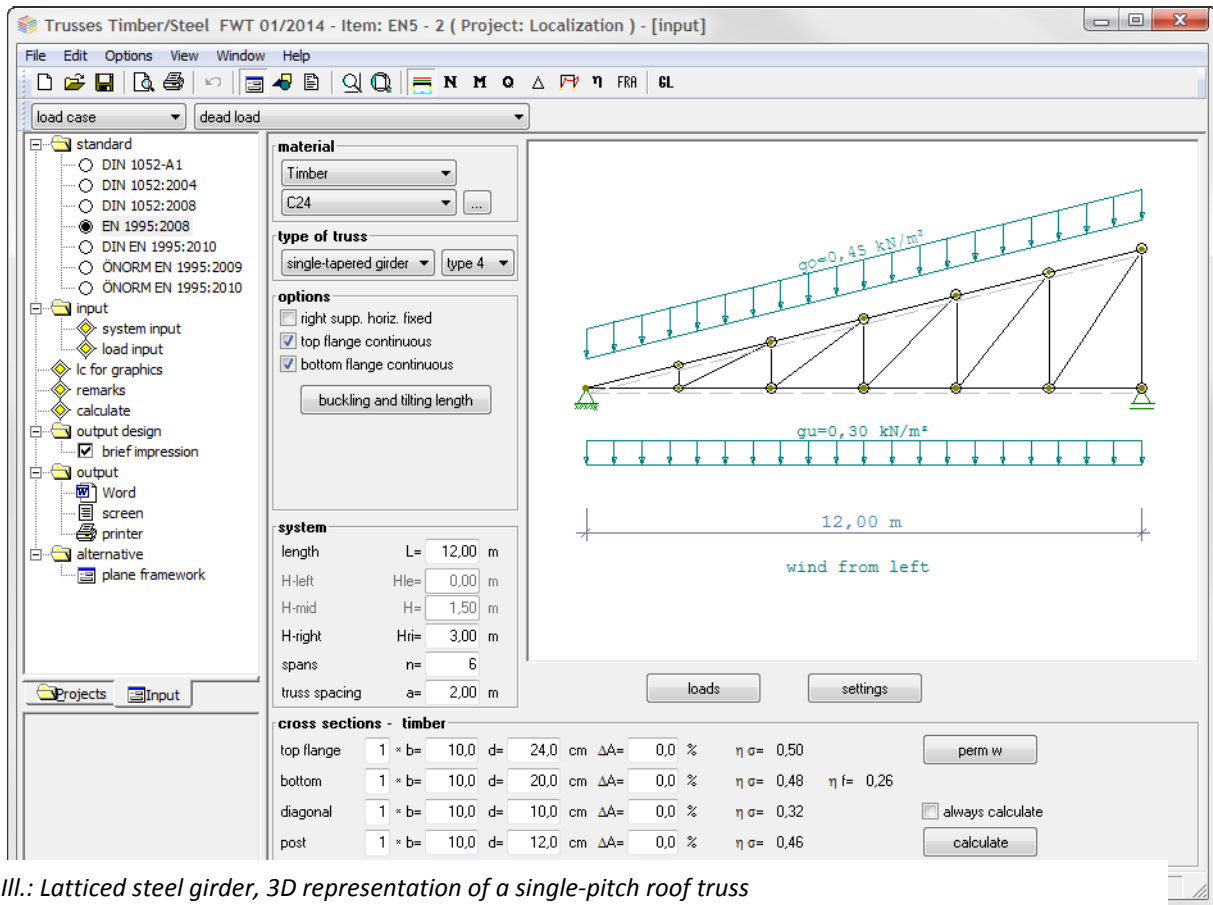
The load bearing capacity, stability and serviceability of latticed timber girders is verified in accordance with either

DIN 1052:2008 or EN 1995-1-1 in combination with the corresponding National Annex.

An interface is available for the transfer of the latticed girder to the Frilo software application Plane Framework.

For latticed steel girders, stress analyses are performed on the top and bottom chord, the diagonal and the leg in accordance with DIN 18800. The factor η_{ki} for buckling in the plane is indicated separately for each bar. Interfaces allow the user to perform other required stability verifications with the appropriate Frilo applications (ST7, STX, ESK). The serviceability verification is performed in the same way.





III.: Latticed steel girder, 3D representation of a single-pitch roof truss

