

Truss 4.7

Fine Ltd. is pleased to announce new version 7 of Truss4 software. The new version brings many new features and important bug fixes. List of new features:

Changes in multi-ply girders

Some basic principles were changed when working with multi-ply girders:

- **Truss 2D** – Basic input for each truss is count of positions in the structure. Count of trusses for manufacturing (input in previous versions) is calculated automatically as the product of positions count and ply count.
- **Truss 3D** – Any change of ply for one truss position will set the same ply to all truss positions with the same truss mark.

Unified input units

All dimensions both in Truss 2D and 3D are defined in millimetres.

Distance measuring with snap points

Distance measuring in 2D workspace uses construction lines and snap points. These features are already used in graphical input of walls and construction lines.

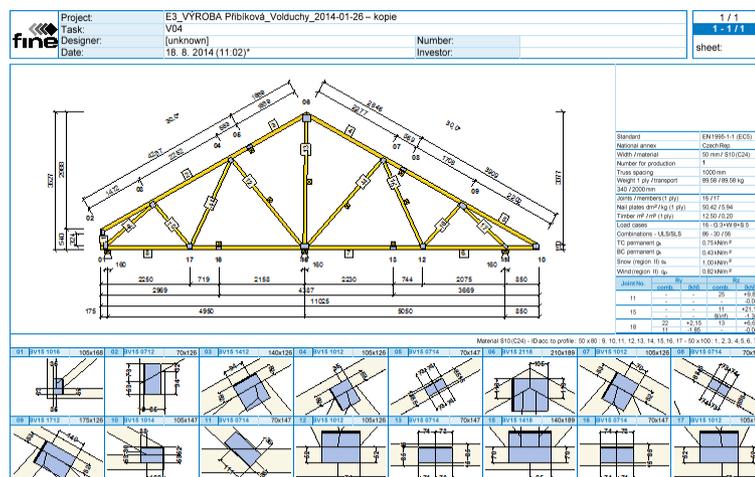
Templates for output documentation

The printing window contains new template manager. This feature is able to save the checked items in the tree menu into a template. This template can be easily selected for any other project. The templates are saved in the company catalogue and can be transported from one computer to another one using export/import commands. Template manager is available both for manufacturing documentation and structural analysis.

New truss layout

Manufacturing documentation contains new part "**Truss layout**". It's a truss drawing with several additional parts that can be added into the drawing:

- Truss information (standard, timber, truss centres, buckling lengths etc.)
- Loading information
- List of reactions
- Joints details
- Cutting bill



[TRUSS4 Beta - Truss 3D | version 4.6.13.14 | hardware key 4021 | Fine spol. s r.o. | Copyright © 2014 Fine spol. s r.o. All Rights Reserved | www.finesoftware.eu]

New truss layout

New *.xls export

All programs (2D, 3D, Explorer) contain new export of *.xls file with basic information and

volumes (timber volume, nail plate weight etc.). This file can be created in the main menu: **"File" - "Export" - "Documentation" - "Project info"**.

Truss 3D

New data structure

The internal structure of the data was changed. Whole project is saved into the one file *.tr3. Files *.trs3D were removed completely. Old projects can be opened without any limitations. Consequentially, the unique folder for each project isn't compulsory any more.

- **"New from current one"** was removed
- **"Save as"** was added. This function will copy current project into selected folder. This item substitutes **"New from current one"** command.
- **"New in folder"** was added. This item is similar to **"New"** command, however, it doesn't create a new project folder.

The interaction of the programs Truss 3D and Truss 2D was changed. Truss 2D launched from Truss 3D works as a modal window of Truss 3D. As Truss 3D isn't available during the work in Truss 2D, Truss 2D contains new button **"Structure view"** in the right bottom corner of the window. This button shows 2D structure layout including measuring ability.

Autosave

Program Truss 3D contains autosave option. The period of automatic saving can be specified in the **"Application option"** window.

Automatic backup

Automatic backup is done automatically after the unexpected crash of the software. Window with recovery options is run automatically when running the software once again. This feature minimizes losses of data after the crash.

Construction layer

This new feature provides ability to import *.dxf drawing as a new layer into the project. This new layer is useful both for input of new structure and for checking the dimensions of existing project. The snap points placed in the construction layer are considered during the input of walls, trusses or construction lines. The range of snap points is equal to snap points on construction lines. Some parts of the drawing like text, blocks or dimensioning are ignored during the import.

Construction layer has own toolbar. This toolbar is available only for 2D workspace.



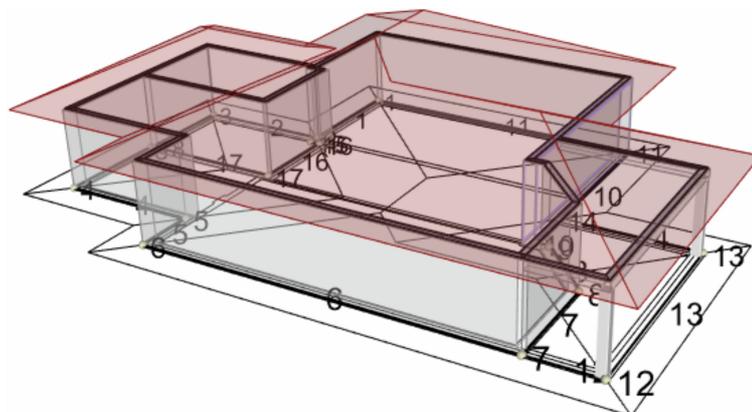
Toolbar for construction layer

Toolbar contains these functions:

-  • Show/hide construction layer. When switched off, the construction layer is still saved in the project file and it's possible to display it later.
-  • Load construction layer from specified *.dxf file.
-  • Remove construction layer.
-  • Move construction layer into specified point.
-  • Switch on or off layers in the drawing.

Note: The original drawing has to be drawn with sufficient precision when working with its snap points. Otherwise the inaccuracy of the drawing will be transferred into the Truss 3D

project and may cause some problems.



Project with imported construction layer

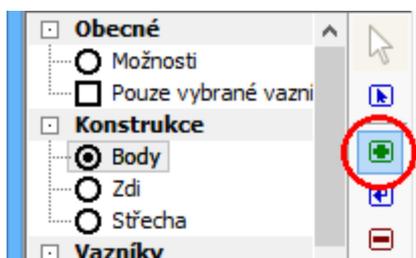
Differentiated types of object snap points

Object snap points are differentiated according to the type of the reference object. User has the ability to distinguish correct reference objects during trusses input. These colours are used in the software:

-  • Object snap point on the edge of the roof surface. The wall is selected as a reference object of the truss when using snap point on the eaves or gable line. Otherwise (snap point on the valley, hip or ridge line) the truss doesn't have any reference object.
-  • Object snap point on the wall. The wall will be considered as a reference object when using this snap point.
-  • Object snap point on the truss. The truss will be considered as a reference object when using this snap point. The load transfer will be created automatically to transport forces from entered truss into the reference girder.
-  • Object snap point on construction layer (imported drawing)
-  • Object snap point on construction line

Graphical input of points

Points can be entered with the help of snap points on existing objects in the 2D workspace. Graphical input can be activated by the button „+” in the toolbar, that is placed along the tree menu in the part “**Points**”.



Switching on the graphical input of points

Extended options of graphical input are available only in 2D workspace. Input in the 3D view is on the same level as in the previous versions.

Separated columns for buckling length and batten spacing in the roofing database

The original value "**Battens/purlins spacing**" in the roofing database was split into two different values:

- **Buckling length** – this value is considered in the truss design as a buckling length of member for out-of-plane buckling.
- **Battens/purlins spacing** - this value is used for the calculations of tiles count and battens/purlins length

This change allows user to have correct sundries calculations and more safety value of the buckling length.

Sorted trusses list in outputs and in the part "Truss check"

The trusses are sorted according to the name in the outputs and in the part "**Truss check**" of the tree menu.

Timber sizes in „Truss check“

Truss view in the part "**Truss check**" of the tree menu shows also member sizes.

Truss 2D

Graphical input of joints

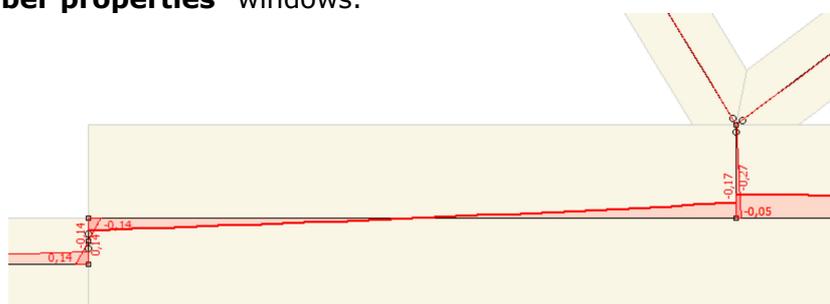
Similarly to the points in Truss 3D, the joints can be also entered with the help of the object snap points in Truss 2D. The object snap points can be placed both on existing members and construction lines.

Setting for switching off loading width in the loads properties

The setting "**Multiply by loading width**" is available only in the load cases, where the consideration of the loading width is switched on. This setting is available in the "**load properties**" window both for joint and member loads. The setting is switched on as a default in these load cases. Switching off is useful when some non-standard load (e.g. point load) should be added into existing load case. The input units are *kN* (point loads) or *kN/m* (continuous load) for loads that aren't multiplied by the loading width and *kN/m* (point load) or *kN/m²* (continuous load) for loads multiplied by the loading width.

New static model for chords with variable depth

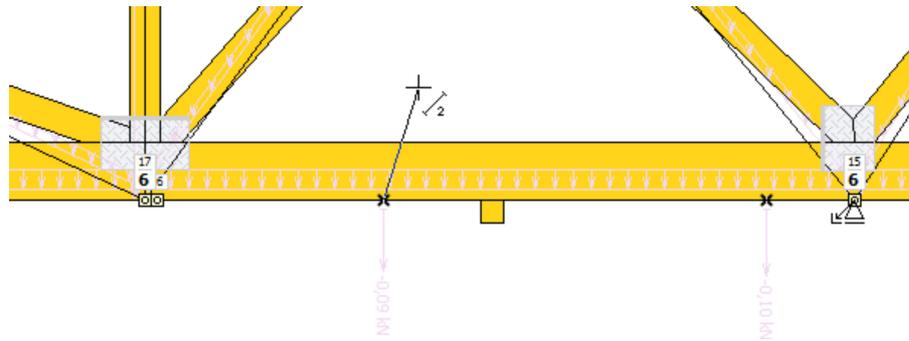
The static model of the chords respects variable depth of the chord parts. Variable timber depths can be entered with the help of the setting "**Divide member in splice**" in the "**Design options**" or "**Member properties**" windows.



Bottom chord with variable timber depth

Object snap points for point loads

Program automatically creates object snap points where the point load is applied to the member. These snap points can be useful for adding a joint or web there. The snap points are highlighted by black cross. Trusses with webs created with the help of these snap points doesn't have any load eccentricities in the joints and provides more economical results, as there aren't significant shear forces in chords.



Input of web using snap point