# teretron Quick Start Guide

Welcome to Teretron, the premium application for Structural Timber Design to Eurocode 5!

This is a Quick Start guide to Teretron that will get you up and running in no time!

1. Starting a New Project

Teretron is organised around Teretron Project files (*.tpr).

In order to perform any calculations, you need to start a new project or load an existing saved one. From the application's opening screen click on `New`. (`File` tab on the Ribbon)
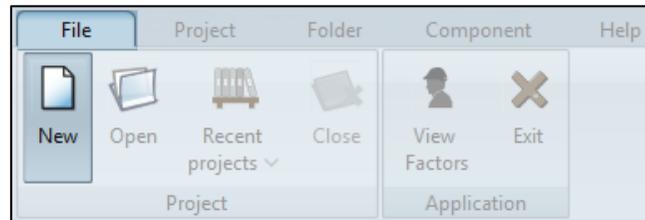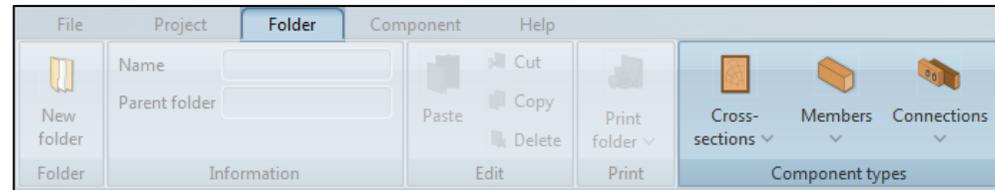

Input a project name and (optionally) other project information on the New Project dialog box.
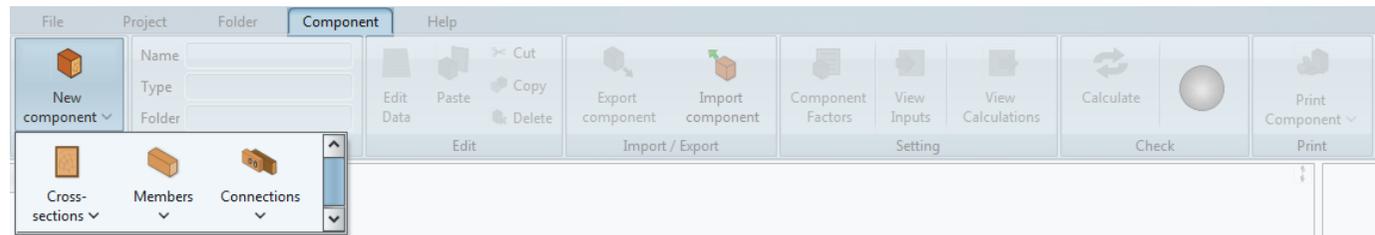
2. Create a new Component

Individual elements of the design (members, cross-sections, connections, etc) are called **Components**. Components are organised in three categories: **Cross-sections**, **Members**, and **Connections**.

From the `Folder` tab select a respective category

or

from the `Component` tab click on `New Component`

3. The main working area

On creating a component, the main workspace is activated with data relevant to that component. The main workspace is split in four areas

Inputs where you type or select the input data for the active component

Outputs where you see the calculations, the check results, and the related references to the Eurocodes and other associated design standards

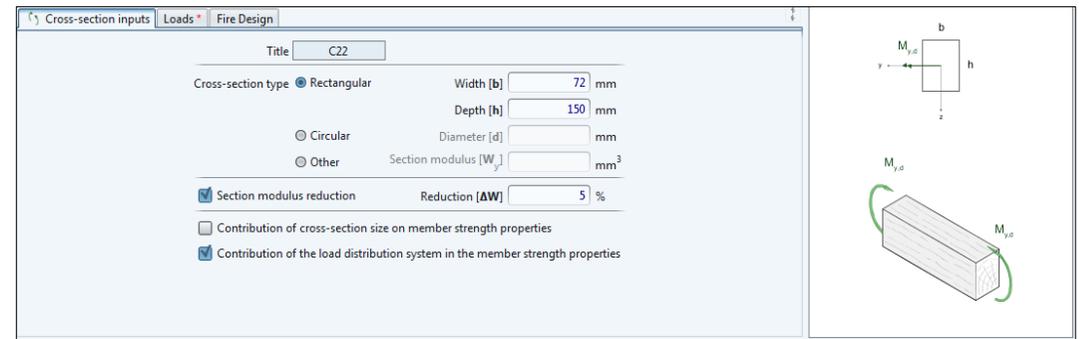**Graphics** with images relevant to the currently active component

Project Browser where you organize the components of your project.
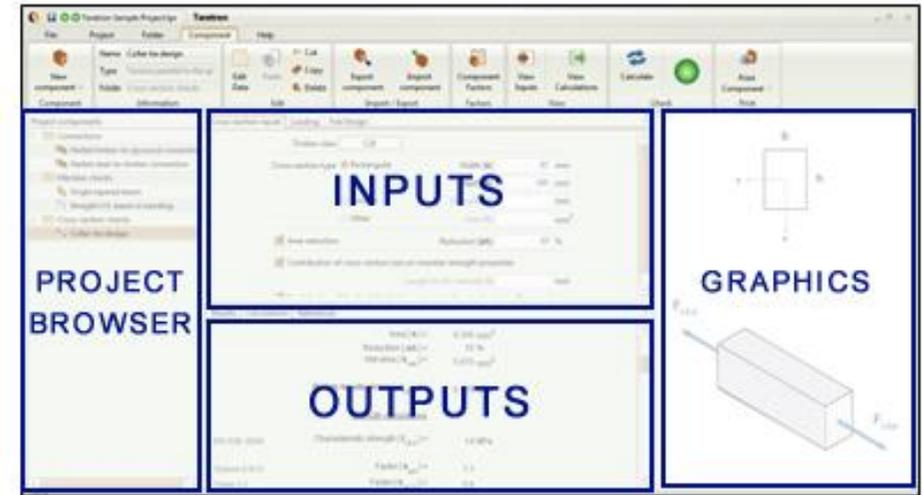
4. Input data

You can navigate the **Input** tabs using the mouse or standard navigation shortcuts, such as

Tab (next input box), **Shift + Tab** (previous input box), and **Ctrl + Tab** (next tab)

5. Check & Calculate

Once the minimum amount of the required input data has been filled in, Teretron lets you know if the checks for that component are satisfied or not.

Simply check the `Traffic Light` on the `Component` tab. To run the full analysis and get the results in detail, simply click on `Calculate` on the `Component` tab.

Alternatively, simply hit the F5 key on the keyboard.

Teretron will run the full analysis and you can get the detailed results on the workspace.

6. Review the Calculations

Once the calculations have been run, the relevant information appears on the Results window in the workspace area, below the Inputs window.

You can navigate the different tabs with the mouse or with the keyboard shortcuts:

**Ctrl + 1** : Results tab

Ctrl + 2 : Calculations tab

Ctrl + 3 : References tab

	Characteristic density [$\rho_{k,1}$] = 630 kg/m^3
	Characteristic density [$\rho_{k,2}$] = 320 kg/m^3
Clause 8.3.2(7)	Pointside withdrawal capacity modification factor = 0.542
Clause 8.3.2(7)	Headside withdrawal capacity modification factor = 0
Equation (8.25)	Characteristic pointside withdrawal strength [$f_{ax,k}$] = 1.109 MPa
Equation (8.25)	Characteristic headside withdrawal strength [$f_{ax,k}$] = 0 MPa
Equation (8.26)	Characteristic headside pull-through strength [$f_{head,k}$] = 27.783 MPa
Equation (8.24)(a)	Characteristic axial withdrawal capacity [$F_{ax,Rk,1}$] = 101.504 N
Equation (8.24)(b)	Characteristic axial withdrawal capacity [$F_{ax,Rk,2}$] = 1,265.863 N
Clause 8.3.2(4)	Characteristic axial withdrawal capacity [$F_{ax,Rk}$] = 101.504 N

Timber-to-timber connection in single shear

Load-carrying capacity values

Characteristic load-carrying capacity per shear plane [$F_{v,Rk,1}$] = 1,794.318 N
Characteristic load-carrying capacity per shear plane [$F_{v,Rk,2}$] = 1,726.826 N
Characteristic load-carrying capacity per shear plane [$F_{v,Rk,3}$] = 748.513 N
Characteristic load-carrying capacity per shear plane [$F_{v,Rk,4}$] = 731.008 N
Characteristic load-carrying capacity per shear plane [$F_{v,Rk,5}$] = 842.221 N
Characteristic load-carrying capacity per shear plane [$F_{v,Rk,6}$] = 883.897 N

7. Printing the Results

To print a specific component, click on `Component > Print Component`. To print the entire project, click `Project > Publish`.

You can set up the page layout or export to standard text formats from the same option.
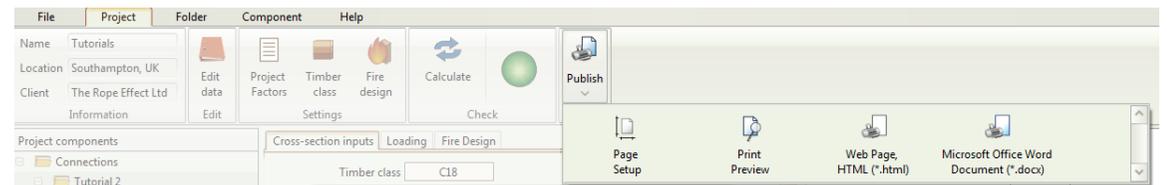
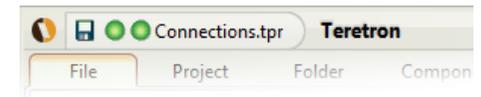In addition you can export to formats such as .rtf and .docx for further processing.

for more information visit www.teretron.com

Tips

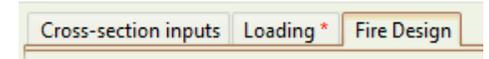|	
Folders	Teretron allows for project management through a standard folder tree on the left hand side. You can add new folders, move & copy components etc.
Printing	To print a specific component, click on `Component > Print Component`. To print the entire project, click `Project > Publish`. You can also set up the page layout or export to standard text formats from the same option.
Eurocode factors	Teretron will start using the standard Eurocode factors adapted by the National Annex relevant to your version. You can view these factors from `File > View Factors`. You can edit the factors used on a project by clicking on `Project > Project Factors`, where you can also create, save, and load specific profiles with your settings. You can edit the factors specified on a specific component, by clicking on `Component > Component Factors`.
Check Project	You can check the status of the entire project through the Traffic Light on the Project tab. This is also always visible on the Quick Launch Toolbar. You can recalculate the entire project via `Project > Calculate` or by hitting F6 on the keyboard.
Fire Design	You can set up Fire Design inputs for the entire project by clicking on `Project > Fire Design`. If you want to set up different settings for a specific component, simply edit the Fire Design tab locally.
Edit Data	You can edit the supplementary information of a project, folder or component (name, location etc) via the input box on the ribbon or by clicking on the `Edit Data` icon on the respective tabs
Incomplete forms	If an input tab is missing data, or has incorrect inputs, a red asterisk appears next to the tab name
Minimize / Maximize	You can minimize or maximize the main tabs of the workspace by clicking on the arrows on the right hand side of the input and output tab bars You can also toggle the views of the Inputs and the Calculations by clicking on `Component > View Inputs` and `Component > View Calculations`
View Image	You can view the informative image on the right hand side in more detail by clicking on it. It will open in a new window, in which you can pan and zoom using the standard mouse controls. Some cases have an "I" icon next to an input box. By clicking on this box, a new window will open, with an image that clarifies the required input
Connections	Connections have a slightly different interface from the cross-section and member checks. Please refer to the Help guide for more information.
…the name	**Teretron** (from Greek *τέρετρον*) was a drilling tool used by the Ancient Greeks for the predrilling of timber structures.