module Notch reinforcement

Wood construction screws: Notch reinforcement

General information: 1. General information

Data input: 2. Elements – beam, support

3. Loads

3D Model: 4. 3D Model

Results: 5. Screw filter

6. Detailed analysis

7. Calculation report

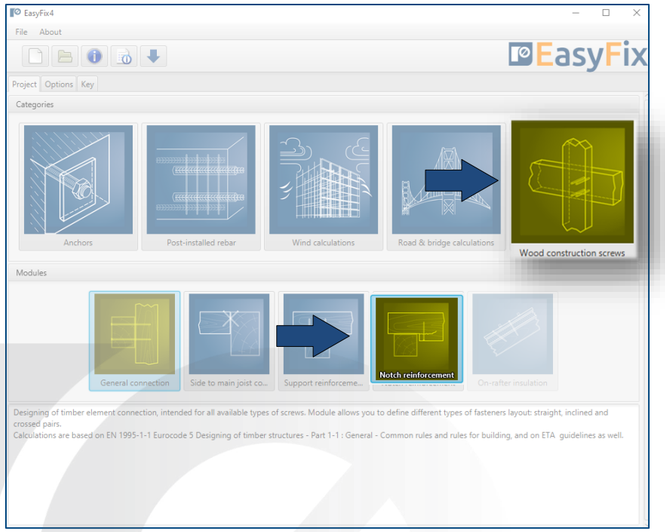
- move to a selected issue

- back to the table of contents

Wood construction screws: Notch reinforcement

1 General information

Category and module selection:



Icons and symbols meaning:

Create a new project

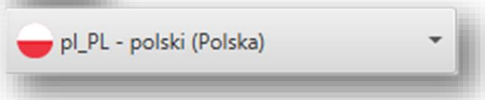
Open a project

Save | **Save as**

Undo | **Redo** changes

Print to a pdf file

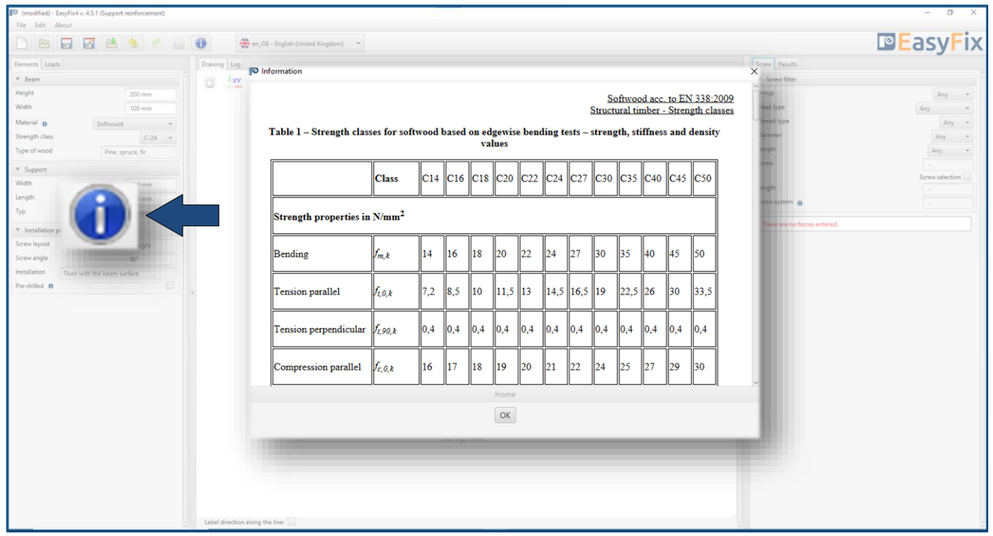
Software **information**



Language selection

Information

Instruction manual



Click to **information icon** to display an additional window containing theory related to a particular issue.

Wood construction screws: Notch reinforcement

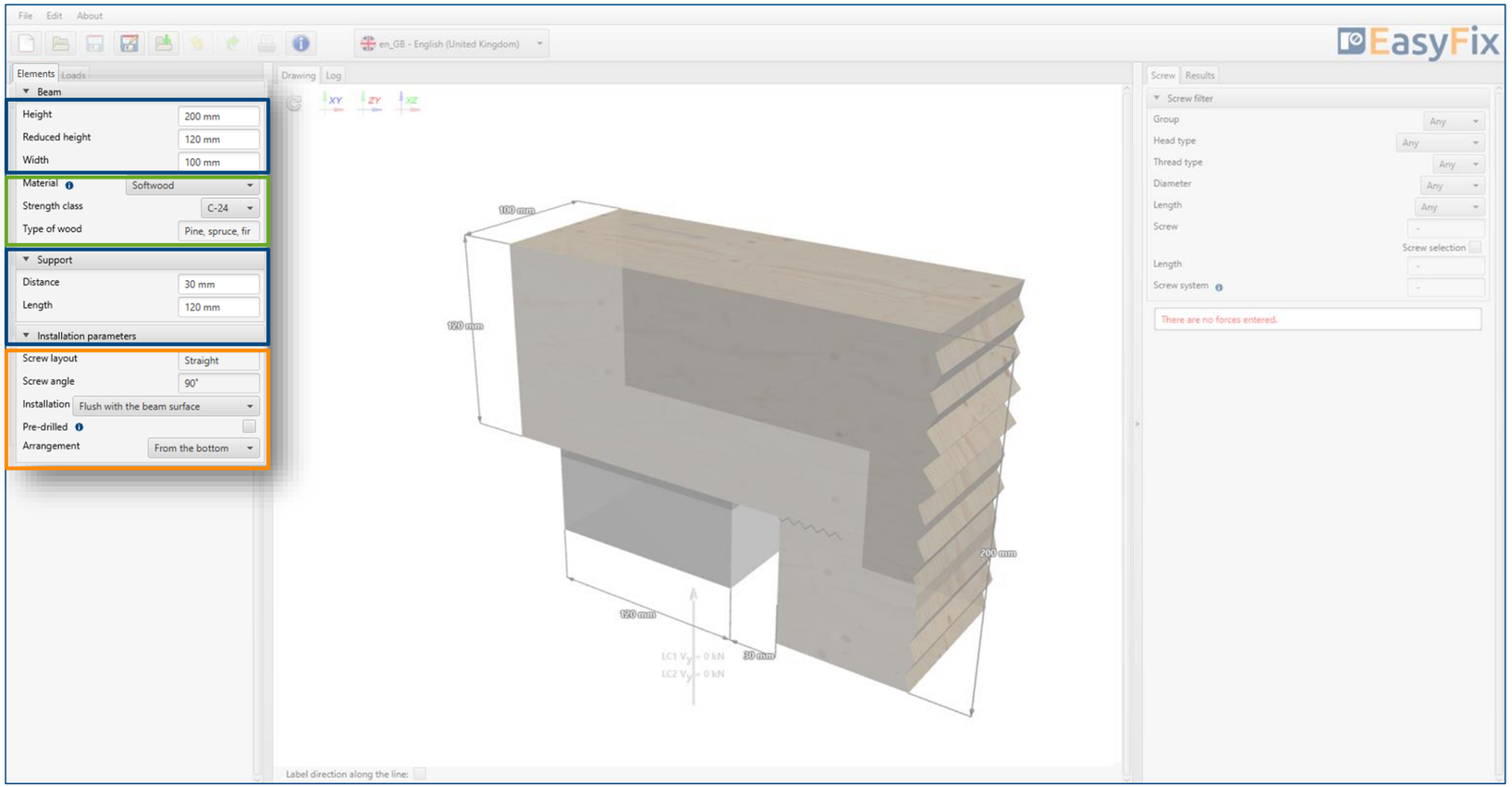
2 Data input
Elements – beam, support »

First, define layout of elements as well their dimensions in cross section along with possible distance from their edges. Next, determine the type and strength class of the wooden material. Further stage is defining of screws assembly. Installation parameters should be defined depend on installation side and screw arrangement.

Geometry and layout of elements::
dimensions can be defined in the side panel and directly on a model as well.

Material:
Inputting data by selection from the list.

Installation parameters:
Inputting data by selection from the list or setting additional options.



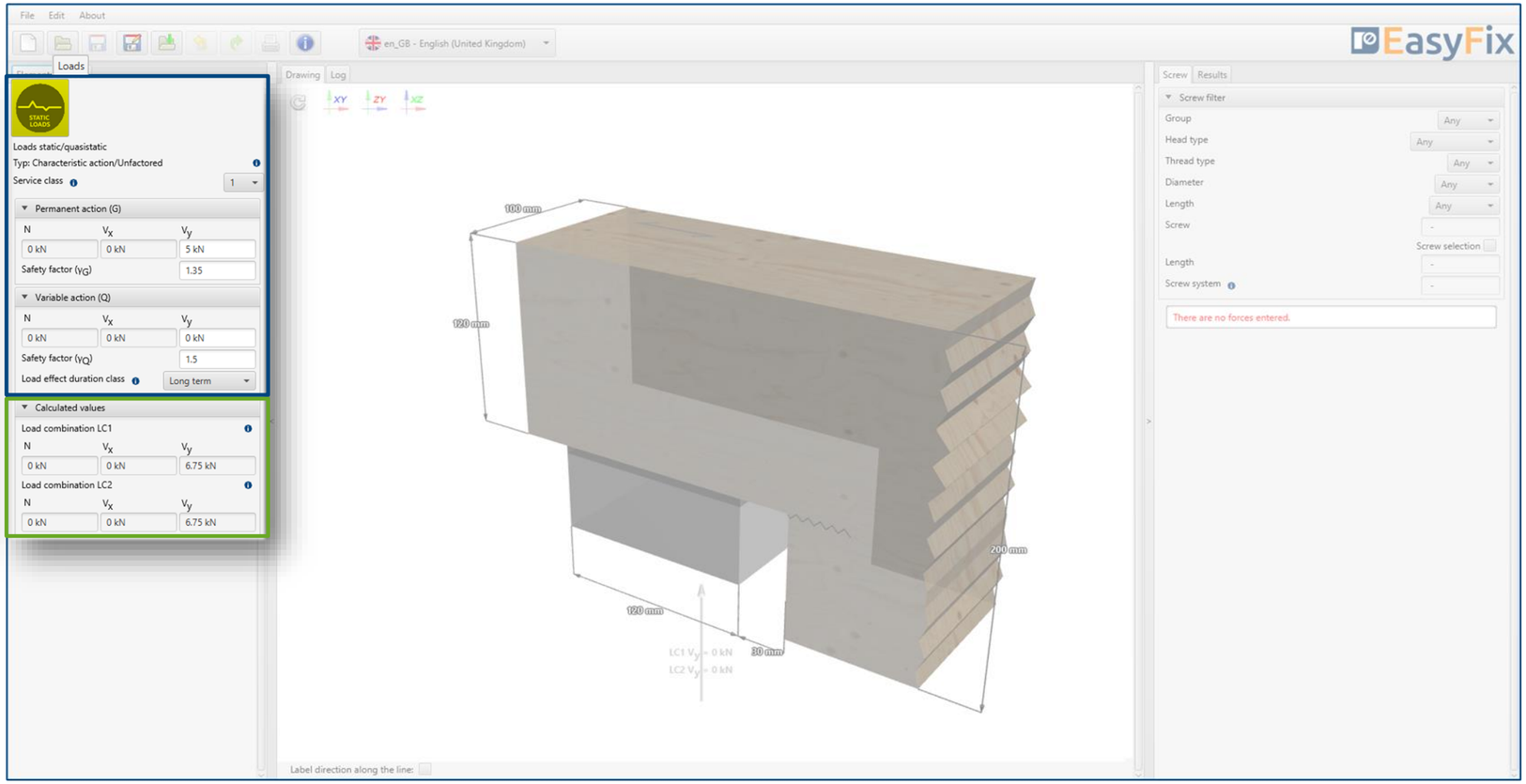
Wood construction screws: Notch reinforcement

3 Data input
Loads »

The final stage of data input is related to loads. In accordance to intended use, wood construction screws are dedicated for static or quasi static loads only. Define characteristic values of permanent and variable loads, service class and load effect duration class as well.

Loads:
Load values can be defined in the side panel and directly on the model as well.

Load combinations:
Design load values for particular load combinations are presented at the bottom part of the panel.



Wood construction screws: Notch reinforcement

4 3D Model »

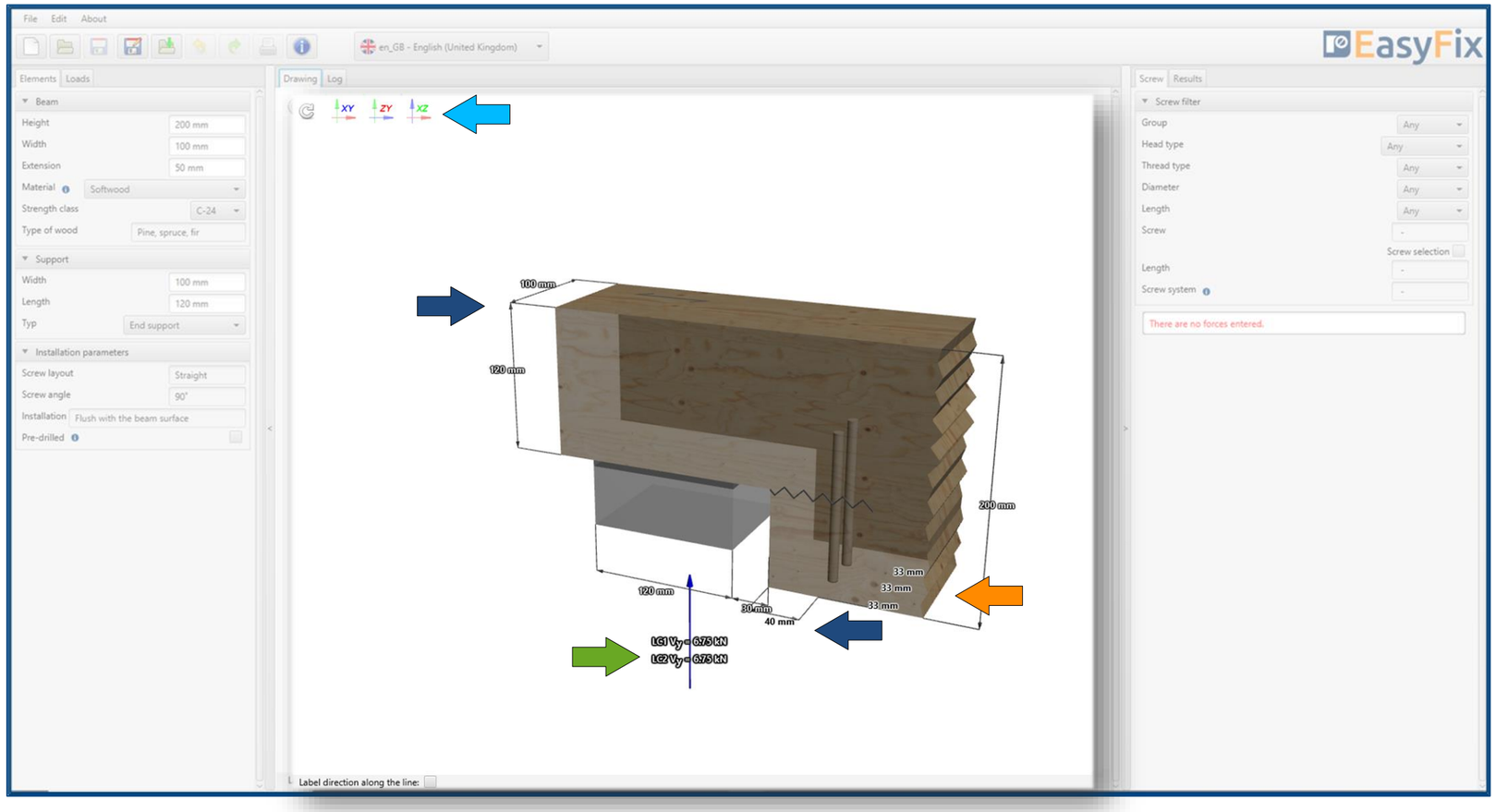
Dynamic 3D model provides a User with a possibility of following results in real time.

Geometry:
Dimensions can be defined in the side panel and directly on a model as well.

Loads:
Load values can be defined in the side panel and directly on a model as well.

Screws layout:
Designed layout is presented on a model with spacings and edge distances.

Model navigation:
Model navigation utilises mouse control or default views.



Wood construction screws: Notch reinforcement

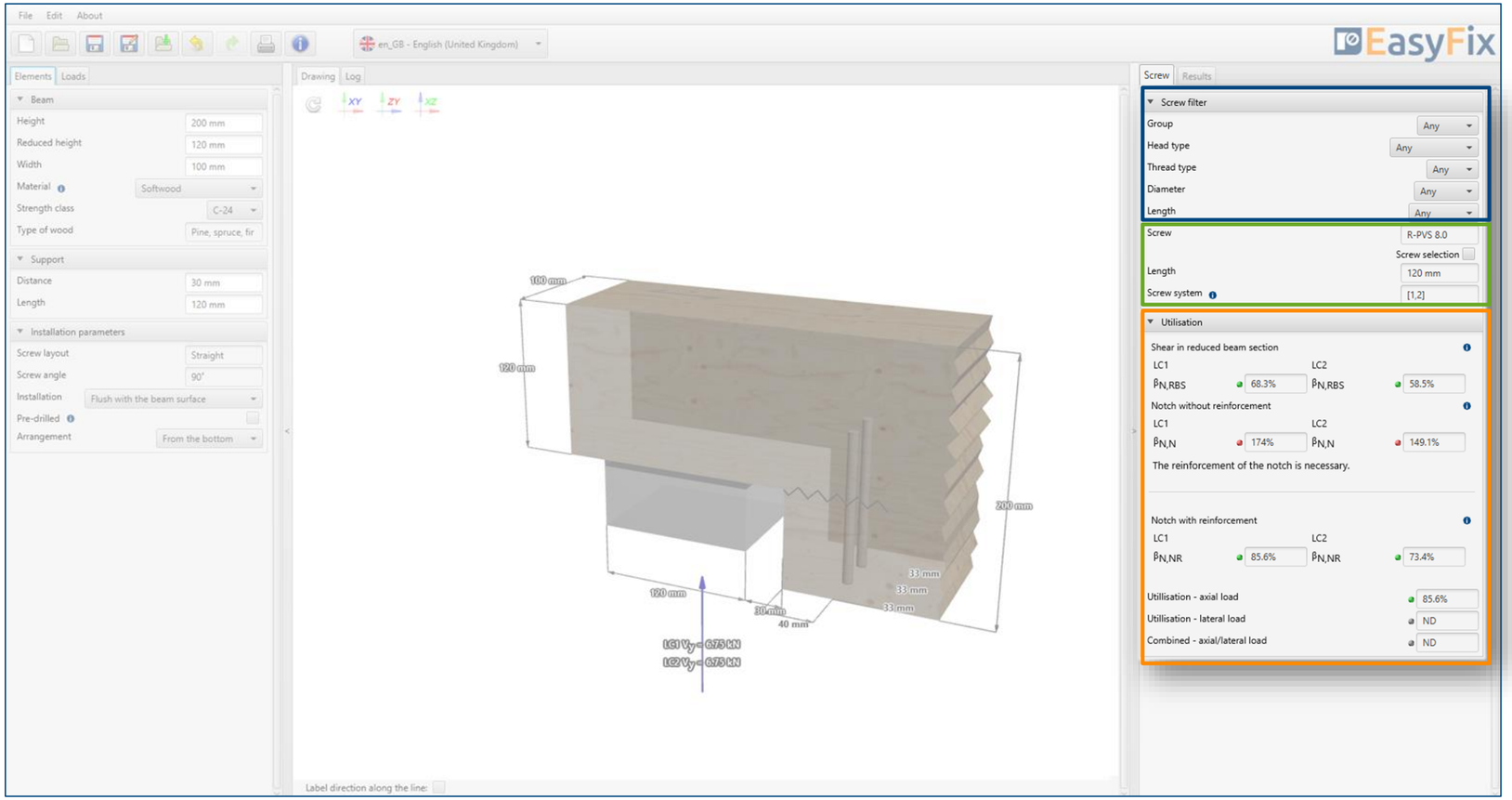
5 Results
Screw filter »

Notch reinforcement module is meant to select optimised number of the fasteners, their sizes and arrangement as well. Result can be managed by available filters. Resistance analysis is performed in two steps – without and with the reinforcement. Information of the reinforcement of the support is necessary is presented in Utilisation panel.

Screw filter:
Using available filters allows to pre-define screws.

Designed product / Screw system:
Information about design solution are presented in the middle part of the panel.

Utilisation:
Basic data of utilisation of design solution is presented at the bottom part of the panel.



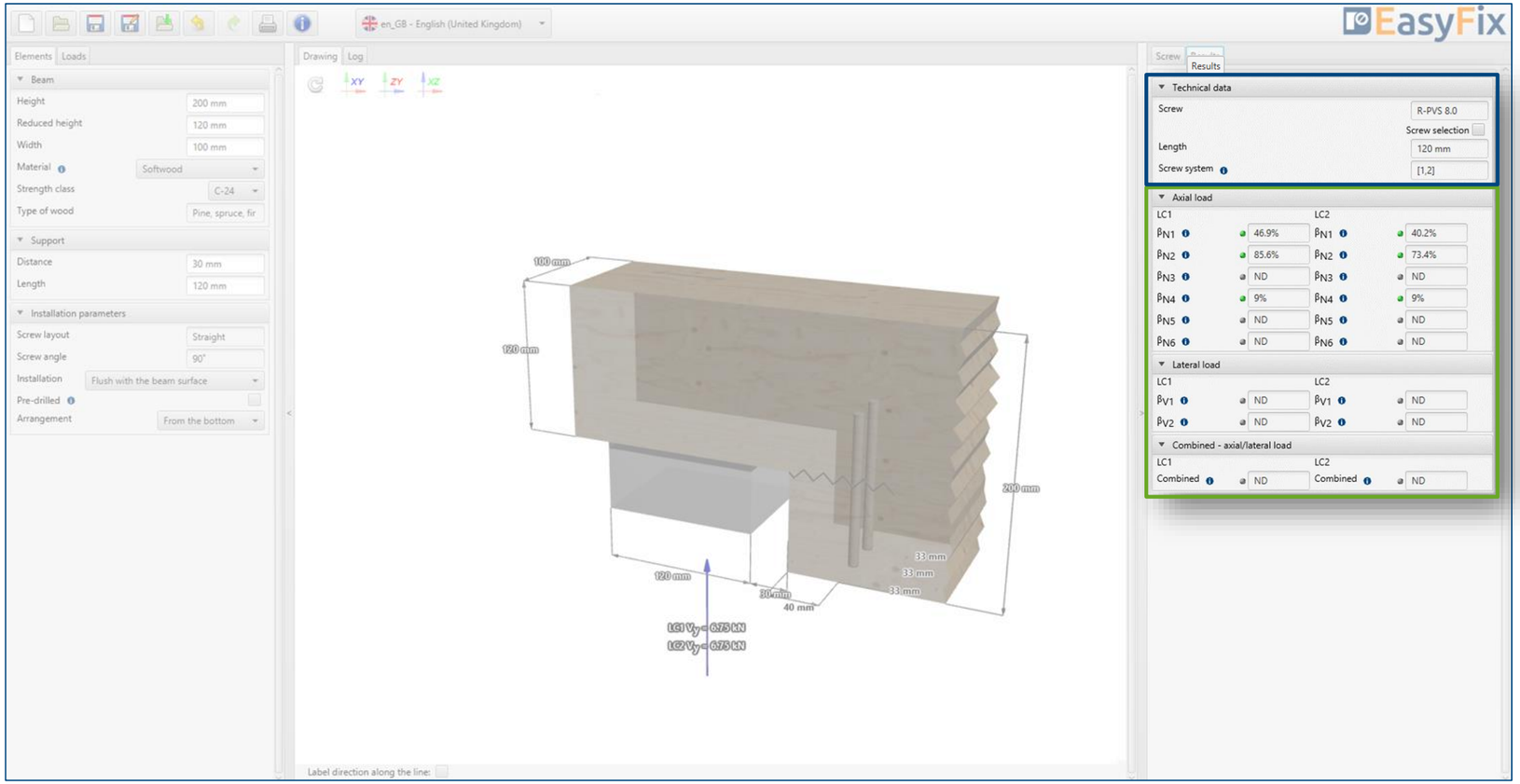
Wood construction screws: Notch reinforcement

6 Result
Detailed analysis »

Detailed analysis allows to check utilisation level for particular failure modes. Defining crucial element helps analysing a case. Detailed information related to all failure modes are available via information icon.

Designed product / Screw system:
Information about design solution are presented in the upper part of the panel.

Utilisation:
Detailed data of utilisation of selected failure modes are presented at the bottom part of the panel.



Wood construction screws: Notch reinforcement

7 Results
Calculation report »

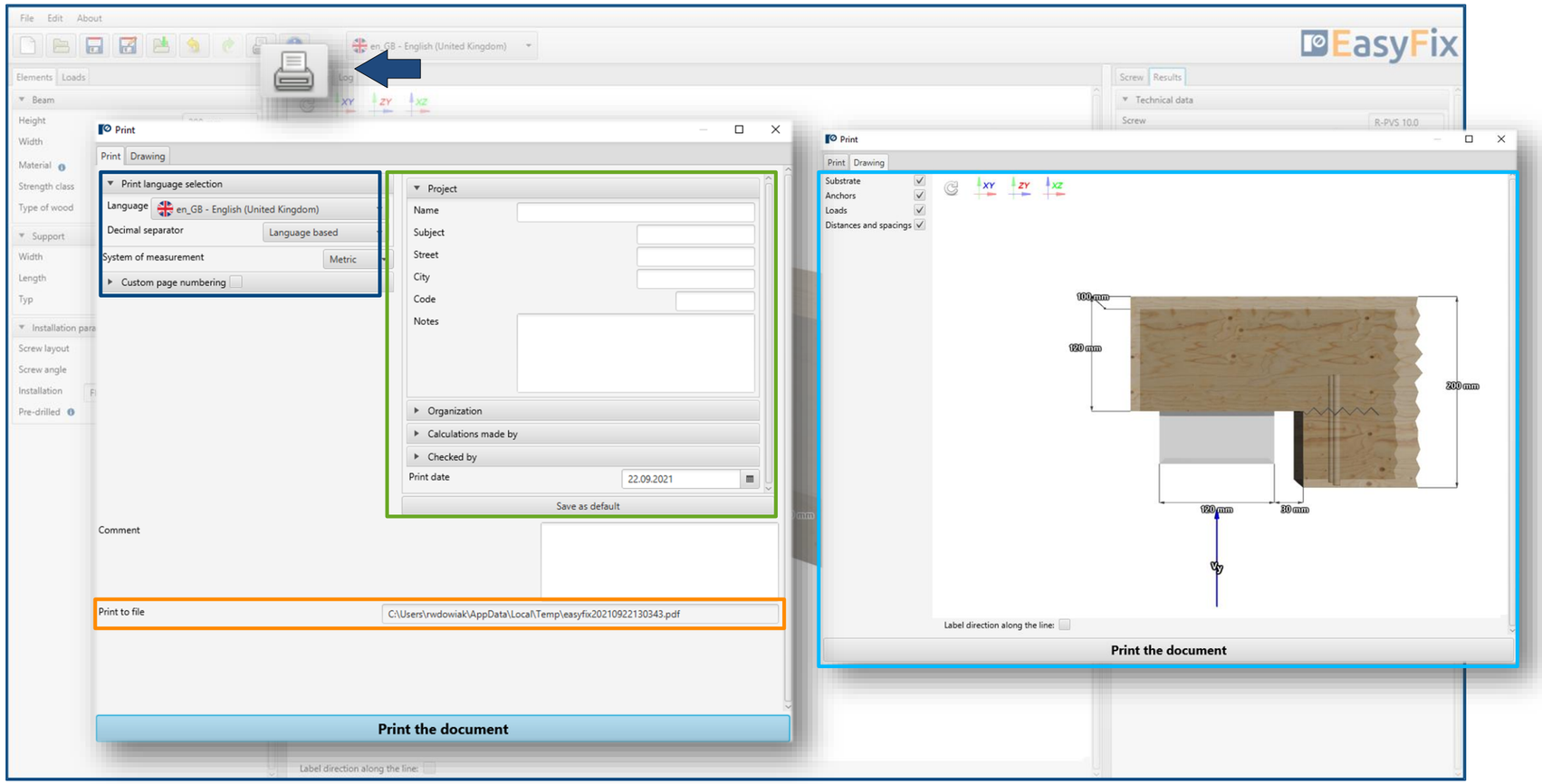
Generating a project report is started by clicking on the Print icon. Next, specify the language of the report along with a possible description. The report is printed to a pdf file, in a destination selected by a Customer.

Print option:
Report language can be defined independently of software language that had been used for calculation process.

Print description:
Detailed description helps to identify the calculation at a later stage of work. This information is visible on the header of each report page.

File path:
Selecting the print file save destination.

Drawing:
In the Drawing panel, it is possible to modify the final model view, that is presented in the printed version of the report.

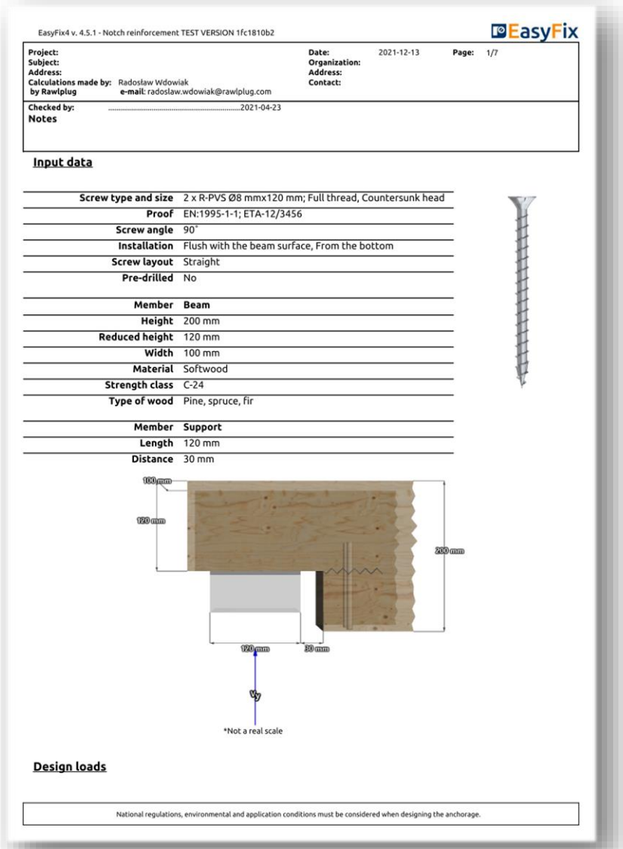


Wood construction screws: Notch reinforcement

7

Result
Calculation report »

Design report includes all information concerning selected design, input data, loads, spacings and edge distance requirements. There are full calculation logs presented along with references to paragraphs concerning appropriate design guidelines.



EasyFix4 v. 4.5.1 - Notch reinforcement TEST VERSION 1fc1810b2

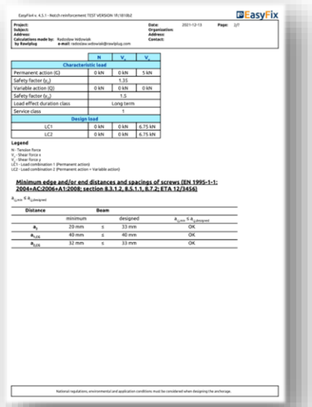
Project:
Subject:
Address:
Calculations made by: Radosław Wdowiak
e-mail: radoslaw.wdowiak@rawlplug.com
Date: 2021-12-13 **Page:** 1/7
Organization:
Address:
Contact:
Checked by: 2021-04-23
Notes

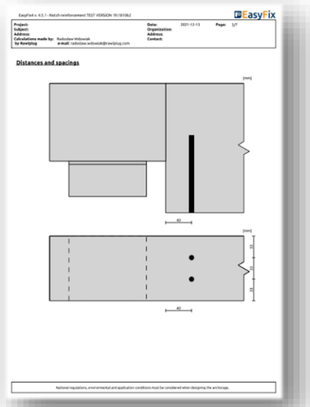
Input data

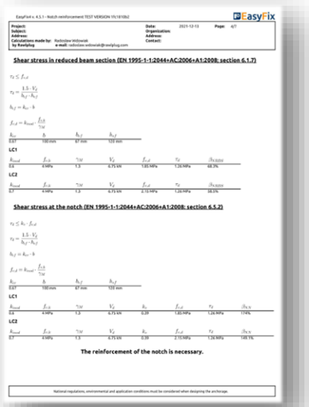
Screw type and size	2 x R-PVS Ø8 mmx120 mm; Full thread, Countersunk head
Proof	EN:1995-1-1; ETA-12/3456
Screw angle	90°
Installation	Flush with the beam surface, From the bottom
Screw layout	Straight
Pre-drilled	No
Member	**Beam**
Height	200 mm
Reduced height	120 mm
Width	100 mm
Material	Softwood
Strength class	C-24
Type of wood	Pine, spruce, fir
Member	**Support**
Length	120 mm
Distance	30 mm

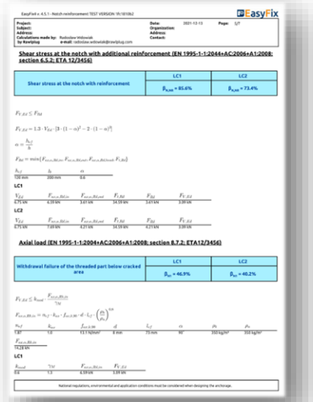
Design loads

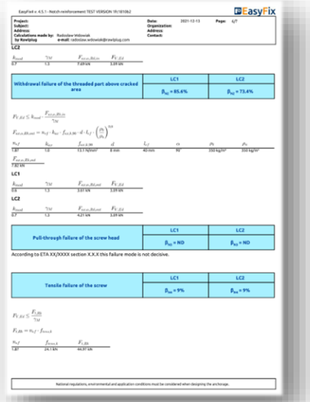
National regulations, environmental and application conditions must be considered when designing the anchorage.

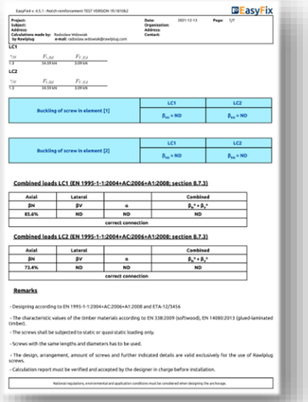








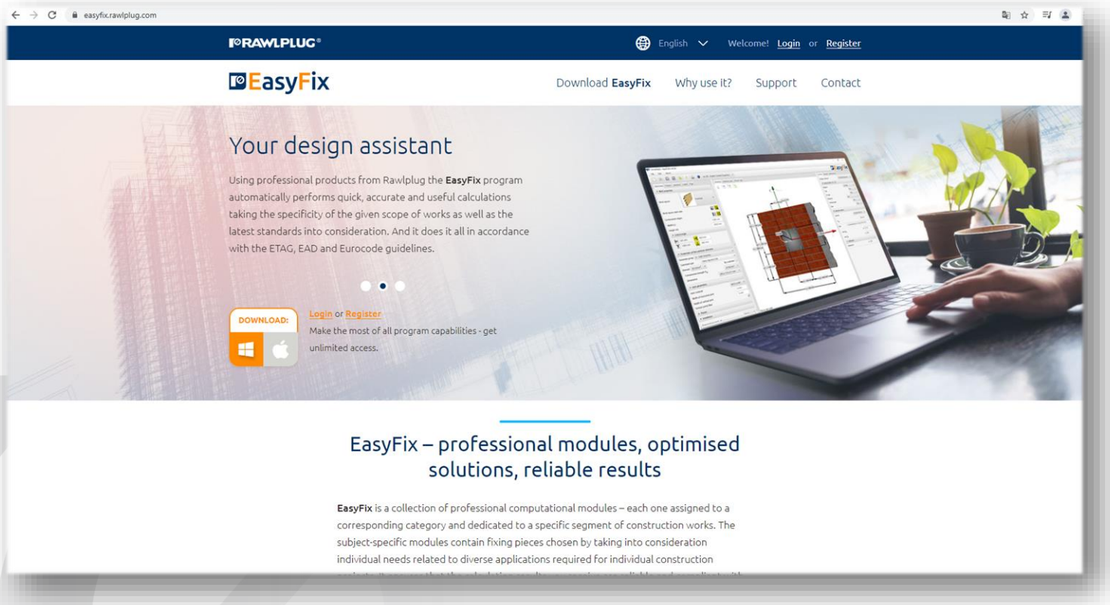




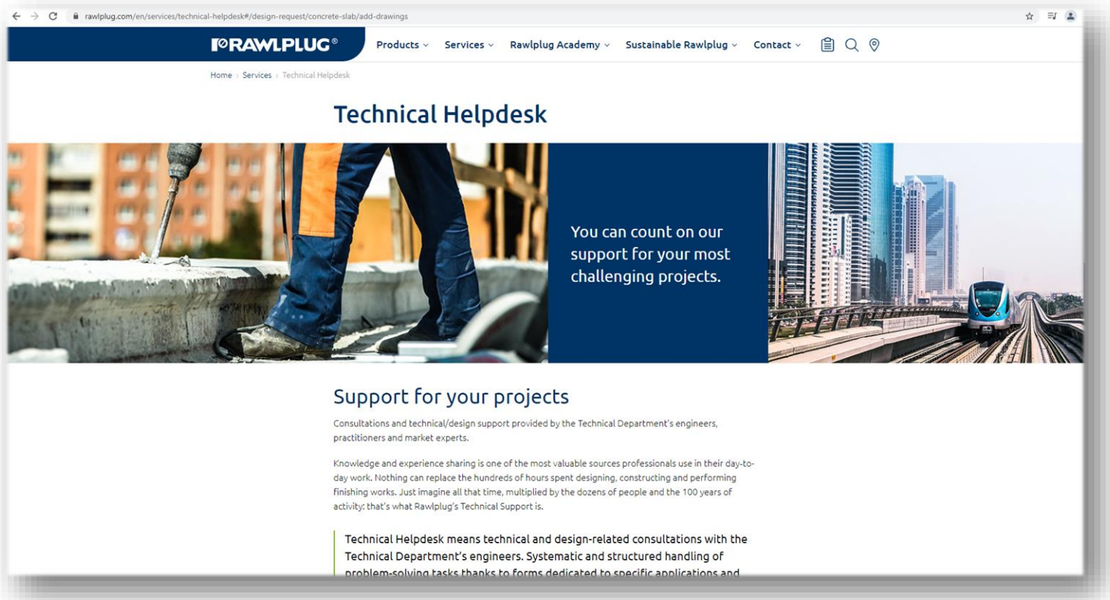
Wood construction screws: Notch reinforcement

Have you got any questions?

Visit **EasyFix website** or contact directly with Rawlplug Technical Department via **Rawlplug Technical Helpdesk**.



https://easyfix.rawlplug.com/



https://www.rawlplug.com/en/services/technical-helpdesk#/