

User Manual

REBAR module

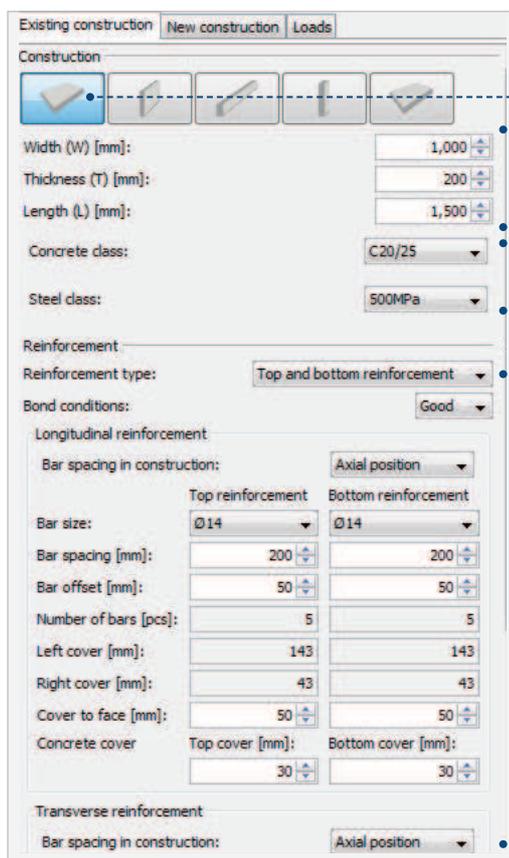
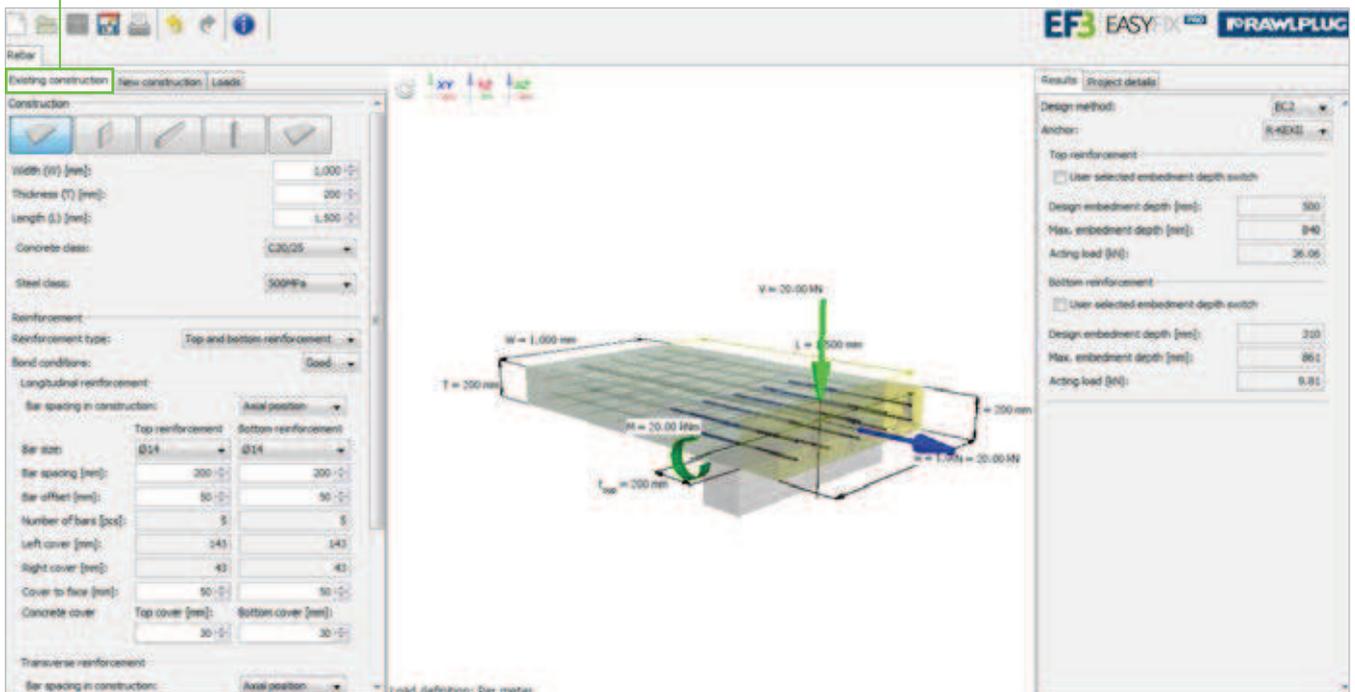
Easvfix

The REBAR module allows the user to design continuity reinforcements in an easy and intuitive manner, and in line with the EUROCODE 2 guidelines. The module comprises various default combinations of joints between the existing and the new reinforced concrete element planned to be built. What is more and truly unique about the module is that it enables you to calculate rebar anchoring depth using the proprietary REDM method, i.e. the Rawlplug Engineering Design Method, which allows designing of even the most highly specialised fixing configurations based on results of long years of research as well as Rawlplug's expertise and experience. Additionally, under mechanical calculations, the module verifies the mechanical strength of the reinforcement already installed by taking the newly defined loads into account, and detects collisions between the existing structure elements and the rebars designed to be installed. The application enables you to define loads per running metre, cross-section and individual rebar, but you can also calculate the maximum anchoring depth and reassure yourself about making the most of the available tensile strength of steel. You should also note that the data stored in the REBAR module comprise – similarly to all other EasyFix modules – tested products that hold relevant European Technical Assessments, and in this particular case, ones which comply with the EOTA TR-023 technical report.

The REBAR module contains the following tabs:
Existing construction, New construction, Loads, Results.

The Existing Construction tab is intended for entering all parameters of the structure on which the fixing is to be done in its current condition. You can define the following:

Existing construction



1. structure type, where the available options are: slab, wall, beam, column, foundation

2. dimensions characteristic of the chosen structure type

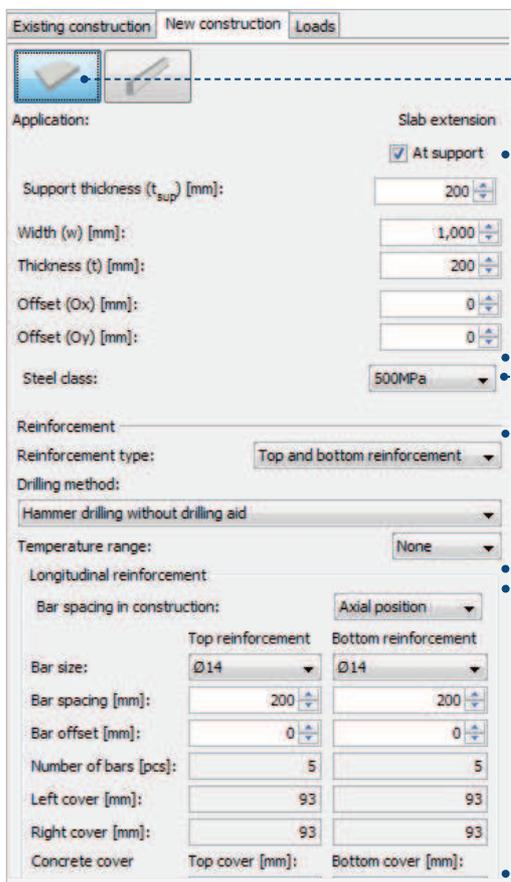
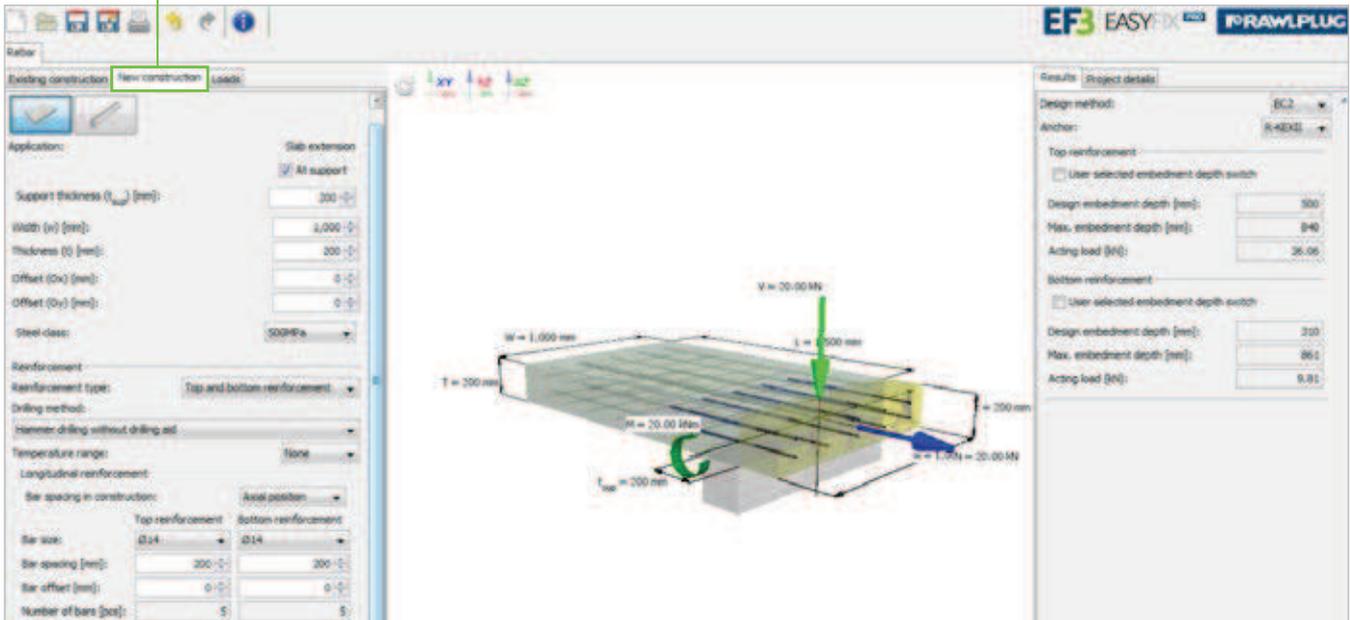
3. class of concrete and steel the structure is made of (options can be selected from a drop-down list or user-defined)

4. number, diameters and spacing of the existing reinforcement



The New Construction tab allow you to enter all parameters defining the structure on which the fixing is to be done in its current condition. You can define the following:

New Construction



1. type of the structure to be joined with the existing one; the number of available options is limited by the choice of the existing structure

2. dimensions characteristic of the chosen structure type

3. class of steel the new structure will be made of (options can be selected from a drop-down list or user-defined)

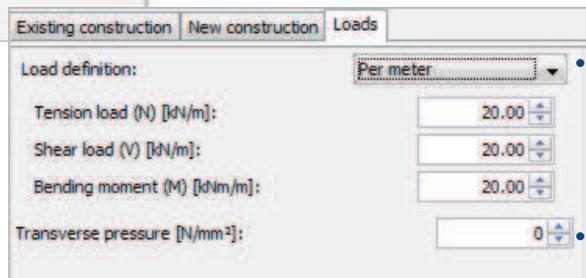
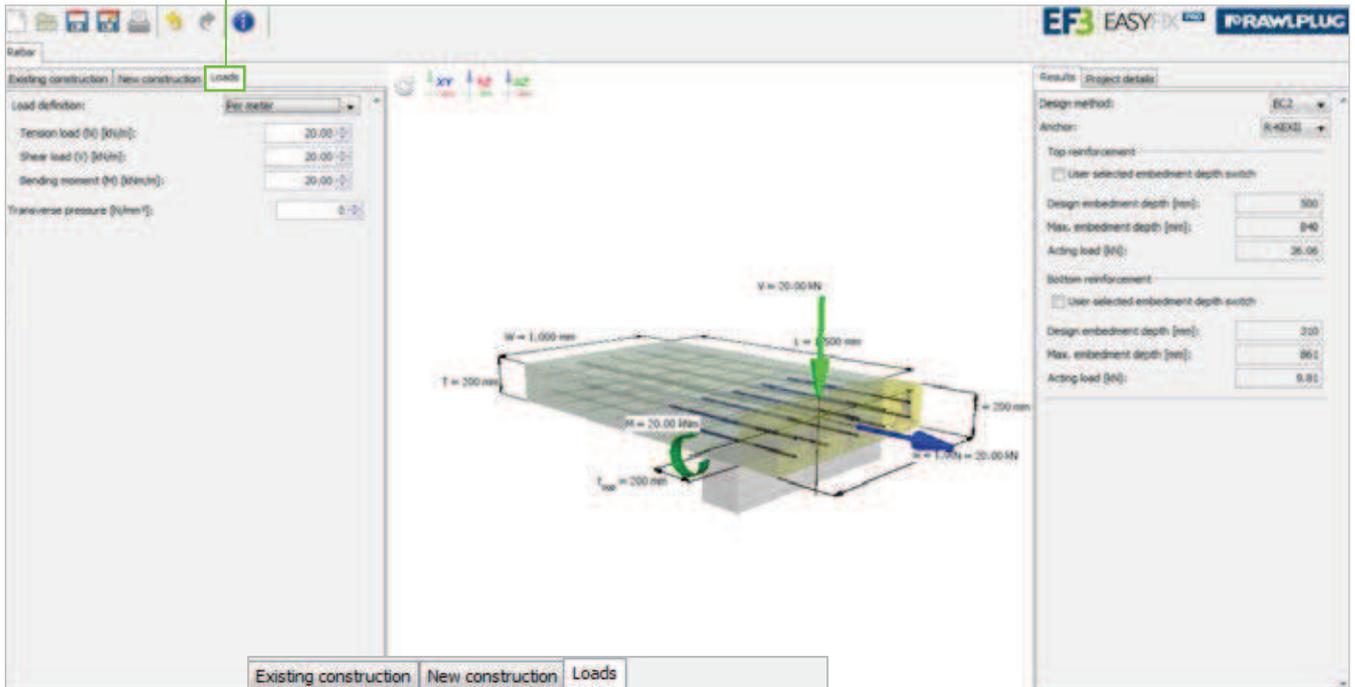
5. rebar installation parameters, including the method of drilling in the existing structure

4. number, diameters and spacing of the reinforcement being designed



The Loads tabs allows you to define the forces assumed to affect the joint. Force values can be entered *per bar* or *per section*, or you can calculate the joint's resistance to threshold tensile load of steel.

Loads

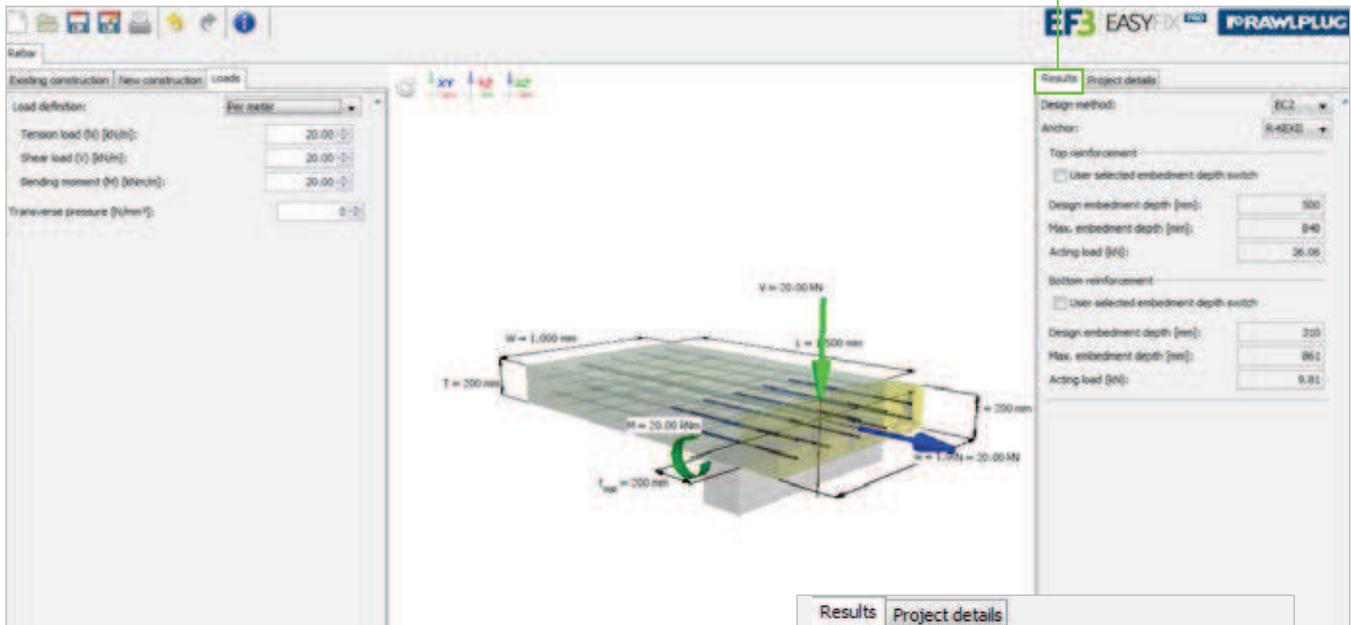


1. option to define loads and other forces



The Results tab shows the results obtained for the chosen variant.
This is also where you can choose:

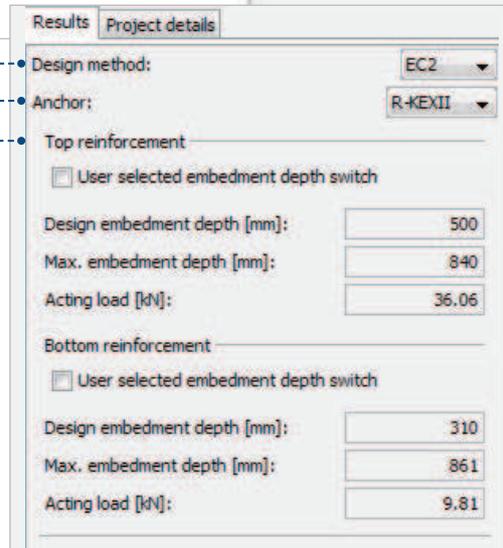
Results



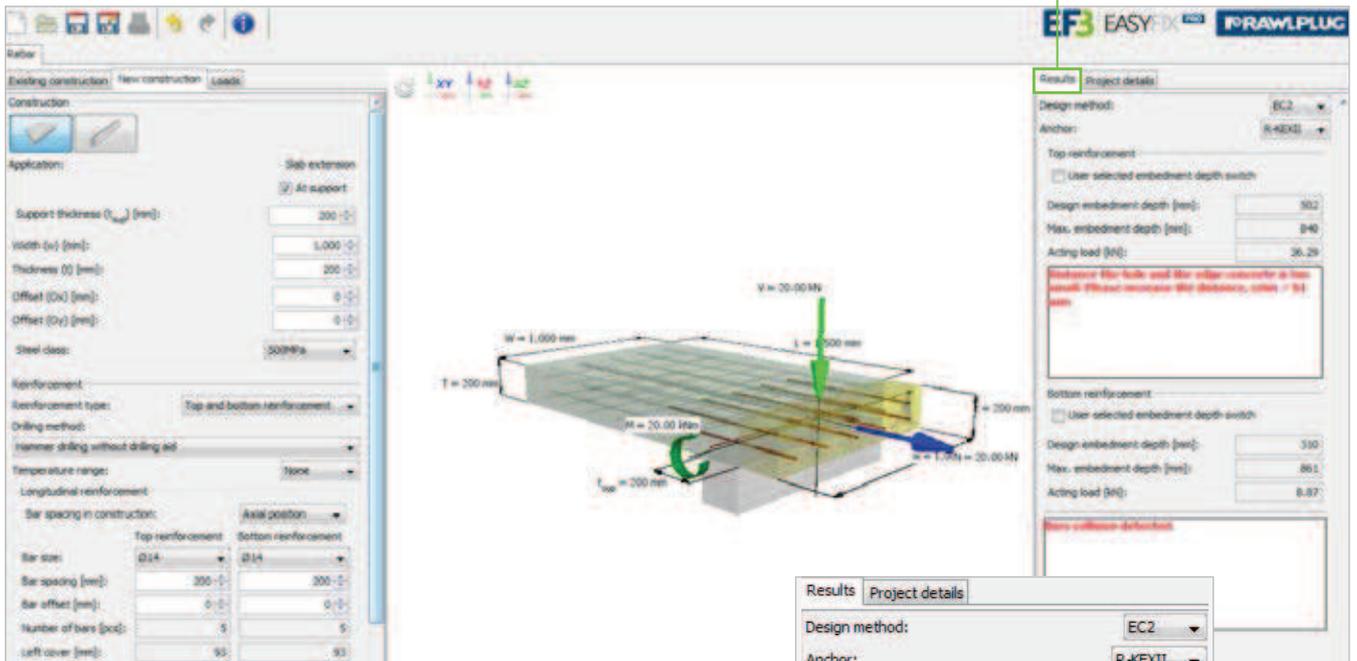
1. design method

2. type of resin to be used for anchoring

3. you can also run calculations by declaring custom rebar anchoring depth, whereupon the program will verify if the declared depth is sufficient for the pre-set parameters



Results



4. the tab additionally notifies you about having exceeded such parameters as steel load capacity, about the concrete cover depth being too small, or about collision between existing rebars and those to be anchored

