

User Manual

# FLAT ROOF module

EasyFix

**The FLAT ROOF module** has been designed to enable making appropriate choices of fixings for insulation materials installed on flat roofs. The module relies on calculations conforming with the EN 1991-1-4 standard on wind actions as well as the ETAG 006 guidelines. It is absolutely crucial that results of calculations are very precise in terms of both the number and length of fixings. Such precision would not be possible to attain without the wide selection of options enabling characteristic design data to be entered and changed as well as without other application features, such as the possibility to define the roof surface profile or the substrate to which thermal and hydro-insulation materials are to be fixed. It should be noted that the software version available to every EasyFix user is basic in the scope covered by the FLAT ROOF module, matching the most common design scenarios. However, if you need to perform calculations for a very specific and complicated concept, just contact Rawlplug's Technical Department via the [rawlplug.com](http://rawlplug.com) website, and our experts will support you using a more advanced program version. What they can do includes calculations with variable insulation thickness or defining oval roof edges.

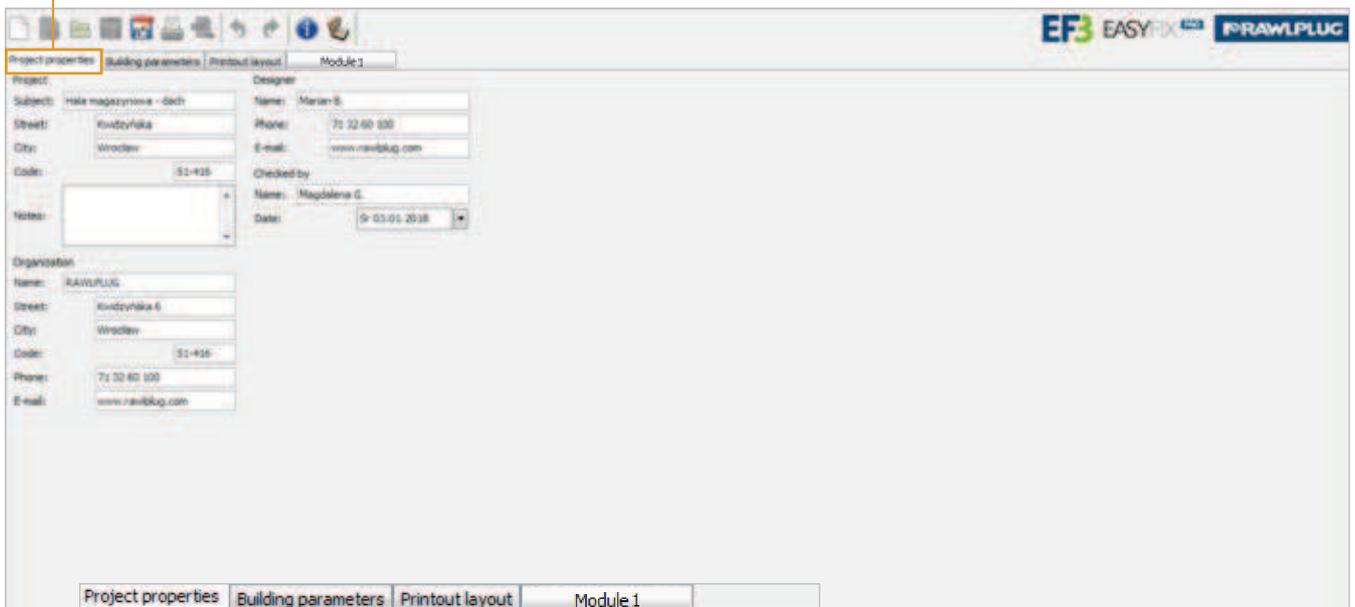
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The FLAT ROOF module contains the following tabs: Project properties, Building parameters, Roof.

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The Project Properties tab enables you to enter detailed information about the given project.

Project properties



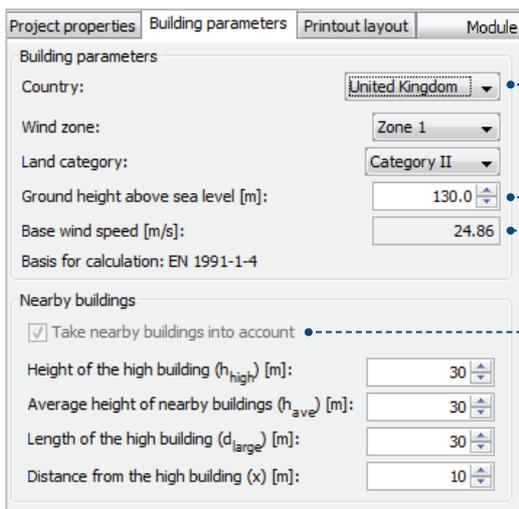
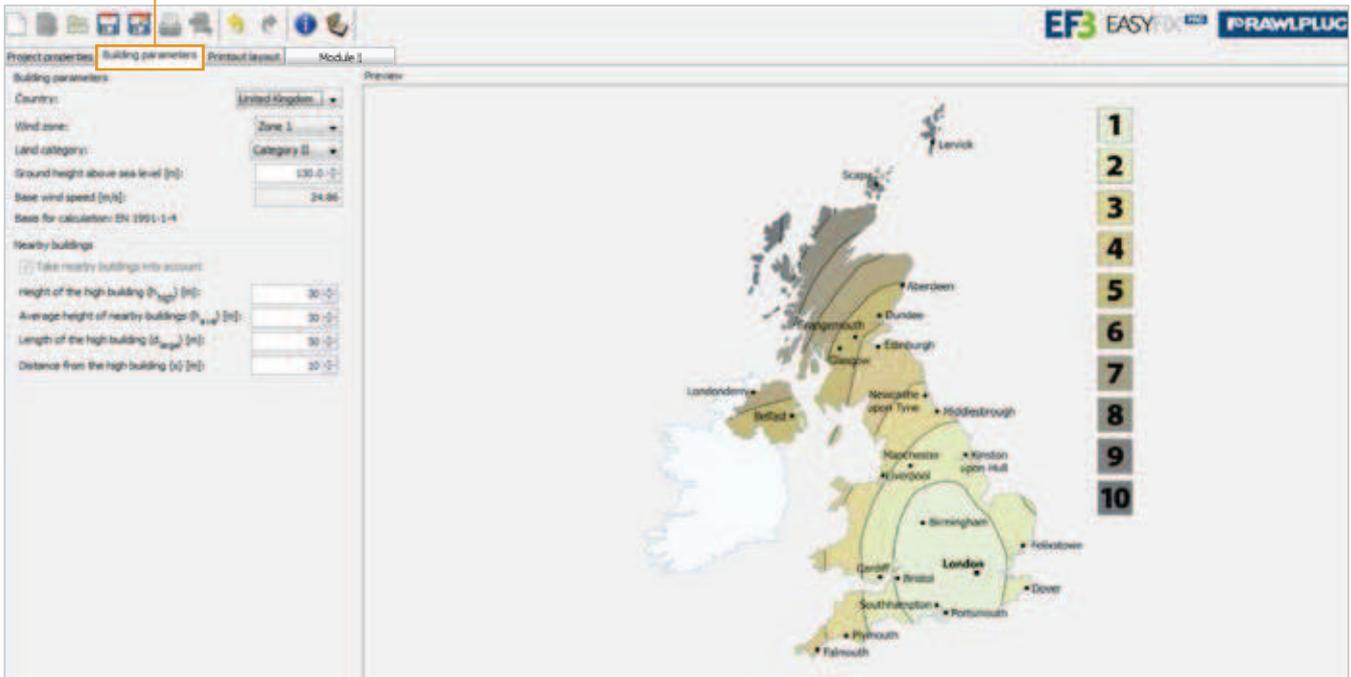
Project properties	Building parameters	Printout layout	Module 1
<b>Project</b>			
Subject:	Hala magazynowa - dach		
Street:	Kwidzyńska		
City:	Wrocław		
Code:	51-416		
Notes:	<div style="border: 1px solid gray; height: 20px;"></div>		
<b>Designer</b>			
Name:	Marian B.		
Phone:	71 32 60 100		
E-mail:	www.rawlplug.com		
<b>Checked by</b>			
Name:	Magdalena G.		
Date:	Śr 03.01.2018		
<b>Organization</b>			
Name:	RAWLPLUG		
Street:	Kwidzyńska 6		
City:	Wrocław		
Code:	51-416		
Phone:	71 32 60 100		
E-mail:	www.rawlplug.com		

1. fields for entering data to identify: design project, engineering office location, designer, reviewer



The Building Parameters tab features the following options:

Building parameters



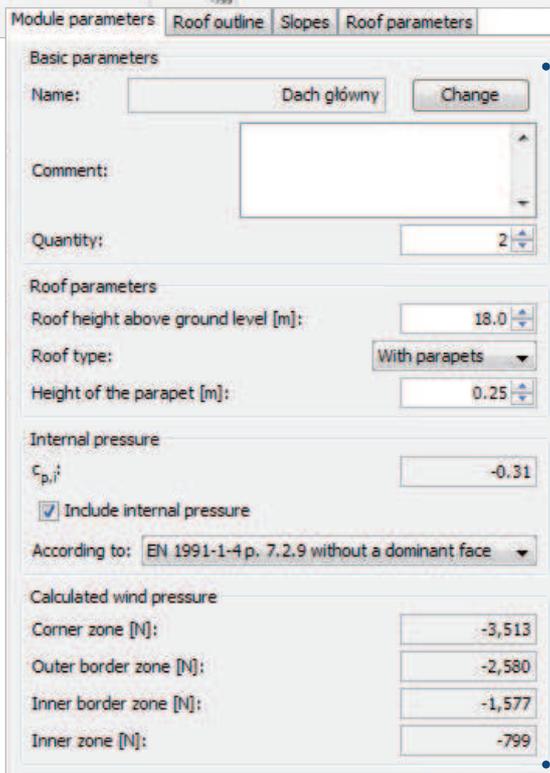
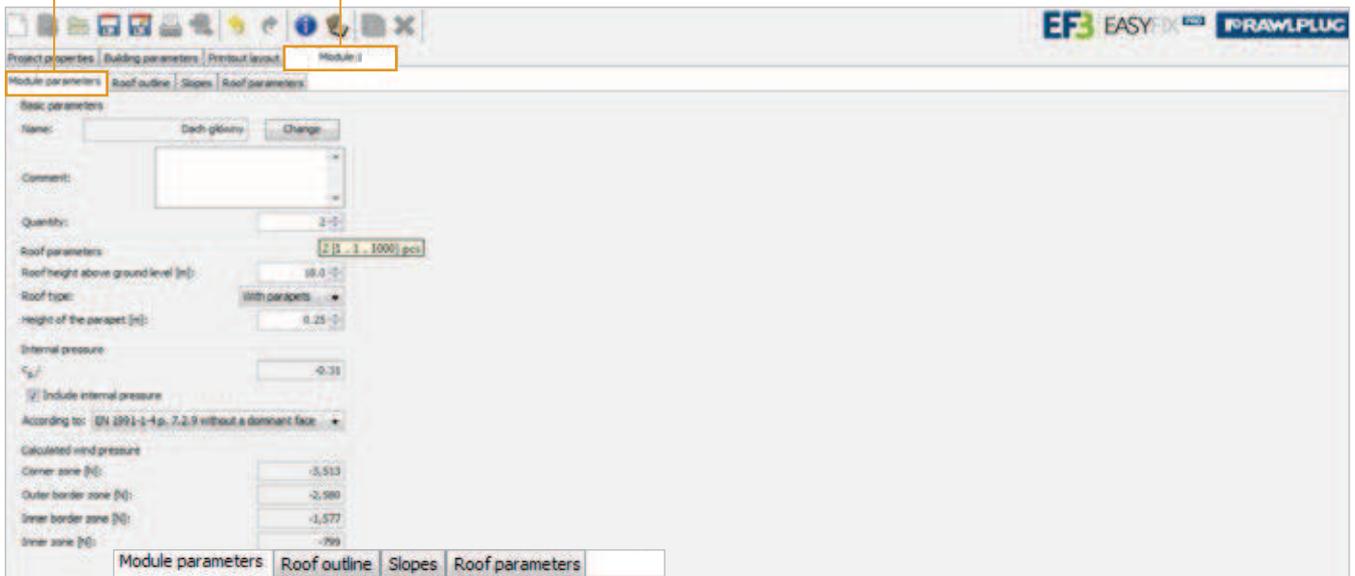
- 1. selection of basic parameters that identify the building location, i.e. country, height above sea level and land category or wind zone
- 2. option to define base wind speed for locations which are not available by default in the application for specific reasons
- 3. possibility to take the impact of nearby (tall) buildings into account on the roof designed



The Roof (Module) tab groups the available features into four subtabs: Module Parameters, Roof Outline, Slopes and Roof Parameters.

Module parameters

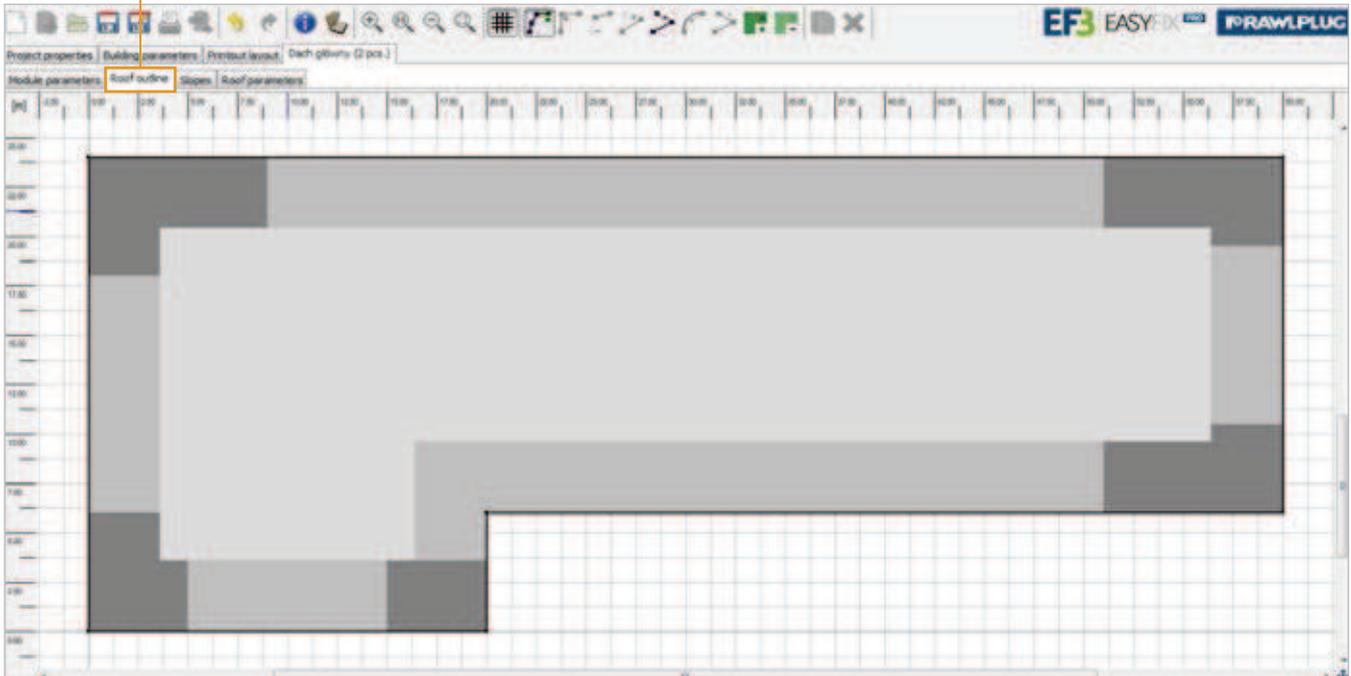
Roof (Module)



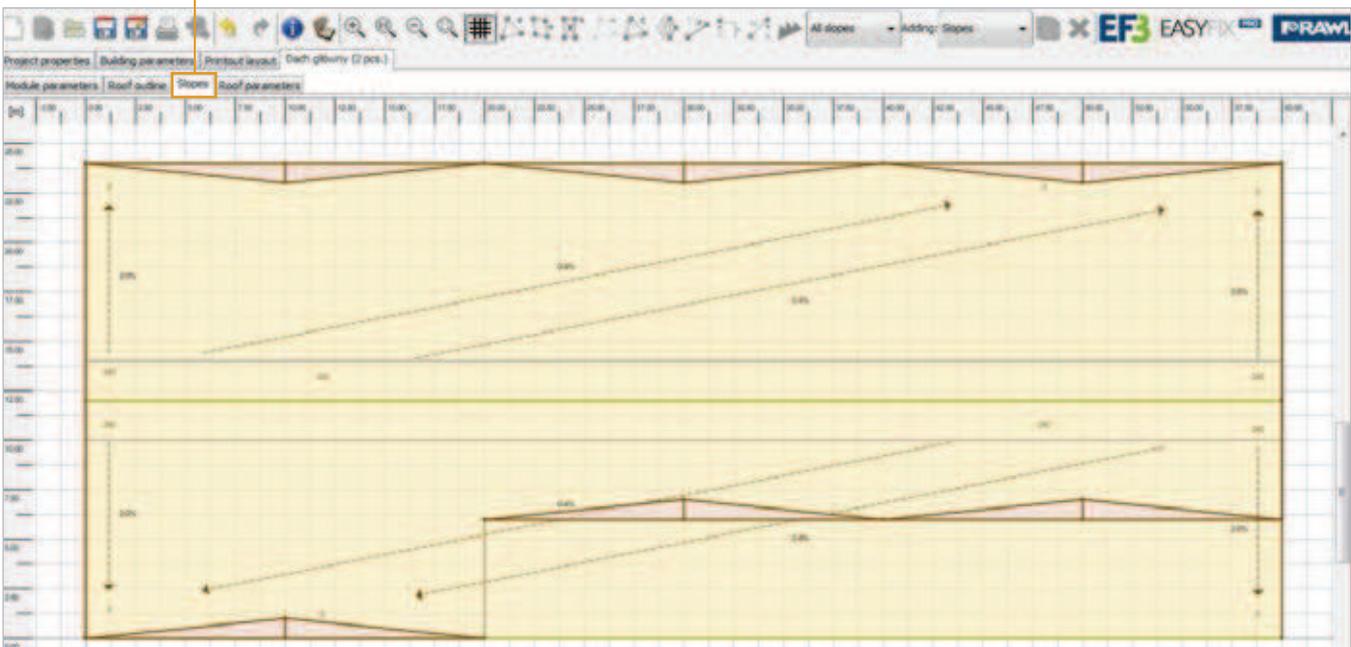
1. this is where you can change the model name, define the roof height above ground level, select the roof edge type, check a box to take internal pressure into consideration in calculations and access results of wind pressure calculations for each roof zone



Roof outline is where you can enter the outline of the roof being designed using various drawing functions.



The Slopes tab allows you to enter slopes and counterslopes to be developed with insulation material of variable thickness (feature available upon submitting a design to Rawlplug's Technical Department).

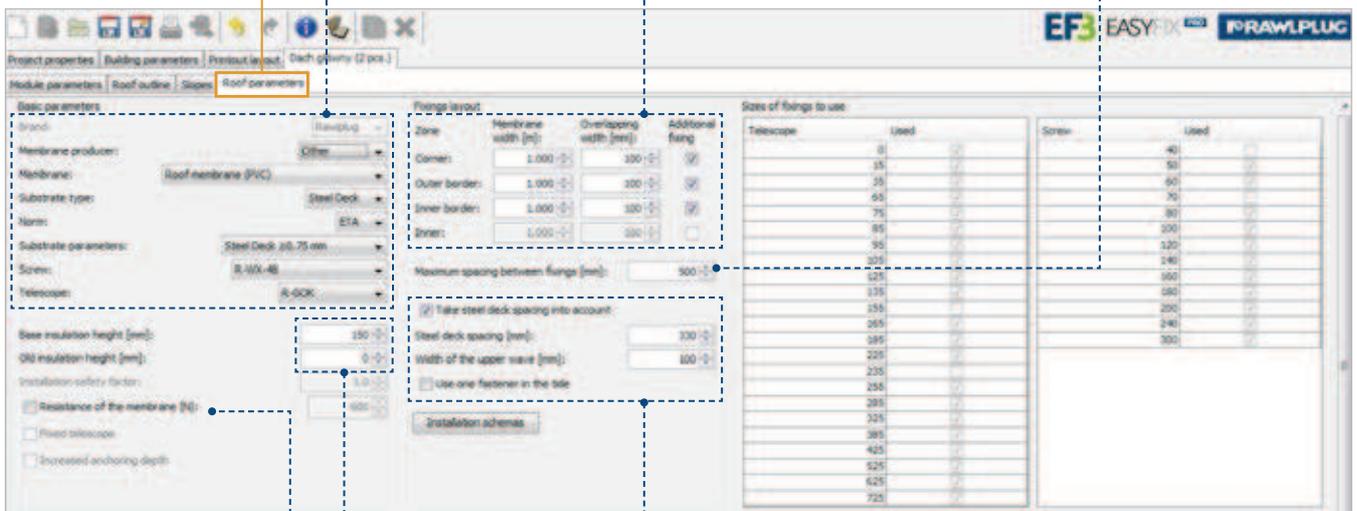


Roof Parameters is a tab that provides the user with the following selection of features:

1. choice of hydro-insulation, substrate and fixing type

4. option to define the membrane and overlap width for the given roof zone, with additional fixing available

5. option to define maximum spacing between fixings



3. option to declare membrane load capacity, if it is relevant

2. option to define base insulation height and old insulation height

6. option to enter sheet dimensions to be taken into account in spacing calculations for roofing made of steel decking

Calculated values					Quantities of fixings (0119 total)			
Fixing depth of the screw:				15	Telescope	Quantity	Screw	Quantity
Design resistance of the elements (ETA-09/0194-2012) [kN]:				505	135	593	50	335
Zone	Area [m <sup>2</sup> ]	Density of fixings [pcs./m <sup>2</sup> ]	Number of fixings [pcs.]	Spacing (l) [mm]	165	125	60	311
Corner:	156.96	7.02	1,102	330.00	185	887	80	2640
Outer border:	286.00	5.12	2,038	330.00	225	610	100	1200
Inner border:	647.04	3.38	2,184	330.00	238	963	120	1095
<b>Total:</b>	<b>1,200.00</b>	<b>4.43</b>	<b>5,334</b>		285	1303		
					321	538		

7. displaying calculation results for screw anchoring depth, load capacity of fixings, surface area of zones, density and number of fixings per zone

8. displaying the chosen set of fixings along with their number

