



Sunfer Project

User Manual

Sunfer Estructuras S.L.U

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Sunfer Project User Manual

0. Introduction

Sunfer Project is Sunfer's online project configurator.

With this easy-to-use configuration software you can create an unlimited number of projects, guided by technical documentation to aid in your decision-making. You can draw directly onto satellite imagery from Google Maps, allowing you to create plans and locate obstacles, all in the exact location you plan to realize your installation. Sunfer Project then automatically carries out a study of the area's sun and shade characteristics, with environmental adjustments that take the location into account.

The configurator carries out automatic calculations such as maximum number of possible panels in your chosen location and expected performance/output of each panel.

You can add all the panels that you want and create your own library of brands and models.

The software automatically creates a budget of necessary material, and you can add additional material as desired to create a detailed final report.

Now you yourself can configure any installation with SUNFER solutions.

Installation and System Requirements.

Sunfer Project is an online, browser-based application, and so it is not necessary to download anything, or have a computer more powerful than is necessary to run an internet browser.

The application is not available for mobile devices.

Configurator Limitations.

Sunfer Project is currently limited to projects that use coplanar solutions from Sunfer; some solutions in the catalogue have not been included.

Although this manual contains some notes about flat roofs, this section is not yet available.

The following details a list of solutions included in the configurator.

01V	04V
02V	45V
02.1V	05V
02.2V	62V
02.3V	07Н
02.4V	61H
01.1V	48V
03V	

It is essential to correctly define the building characteristics so that the configurator can find the optimal Sunfer solution for the installation.

1. Main Menu

Link to access software:

https://platform-sunfer.ezzing.com/login/platform





In the main menu we find the different sections of the configuration software.

User-Translate-Dashboard-Partners-Products-Layouts-Projects-Settings

The Translate, Dashboard, Partners, Layouts, and Settings sections are reserved for the configuration of the application itself and users do not have access to them.



1.1 User





From the main menu we can access the submenu by clicking on the username. A window will open where we can manage the configuration and data of our user account.



1.2 Products

In my large	ER								4
🕼 Translate								Delete products + Add product	Selected filters
🕼 Dashboard						Add a	nd delete		No filters applied
Partners	0, 100, 250 of 495 Total items					products		Display by Name 👻 In order ascending 👻	Categories Manufacturers
Products		Category	Manufacturer	Margin	VAT	Cost	Provider reference	Distributor reference	Search category Add
Projects		Solutions	Sunfer	-		-			Modules
Settings	ierta metálica	Solutions	Sunfer	-	-	-	-	A search a fille and he also	Inverters
		Solutions	Sunfer	-	-	-	-	Apply filters to the	Structures
		Solutions	Sunfer	-	-	-	-	search	Optimizers
		Solutions	Sunfer	-	-	-			Solutions
		Solutions	Sunfer	-	-	-	-		
		Solutions	Sunfer	-	-	-	-		
		Solutions	Sunfer	-	-	-	-		
		Solutions	Sunfer	-	-	-	-		
		Solutions	Sunfer	-	-	-			
		Solutions	Sunfer	-	-	-			
		Solutions	Sunfer	-	-	-	-		
		Solutions	Sunfer	-	-	-			
		Solutions	Sunfer	-	-	-	-		
		Solutions	Sunfer	-	-	-			
	EMENT 1 (10 ud.)	Structures	Sunfer	-		€ 219,87	12960	-	

In the **Products** section there is a list of Sunfer solutions included in the program. We can also add or delete products like panels or inverters.

1.2.1 Create a New Product

🚺 termy beg	ER										۵
🕼 Translate								🖞 Delete products 🕂	- Add product	Selected filters	
🕼 Dashboard										No filters applied	
🚔 Partners	0, 100, 250 of 495 Total items							Display by Name 👻 In order	ascending 👻 🖉	Categories Manufacturers	
Products		Category	Manufacturer	Margin	VAT	Cost	Provider reference	Distributor reference		Search category	Add
 Layouts Projects 		Solutions	Sunfer	-	-	-		-		Modules	
Settings	ierta metálica	Solutions	Sunfer	-	-	-	-	-		Inverters	
		Solutions	Sunfer	-	-	-	-	-		Structures	
		Solutions	Sunfer	-	-	-	-	-		Optimizers	
		Solutions	Sunfer	-	-	-	-	-		Solutions	
		Solutions	Sunfer	-	-	-	-	-			
		Solutions	Sunfer	-	-	-	-	-			
		Solutions	Sunfer	-	-	-	-	-			
		Solutions	Sunfer	-	-	-	-	-			
		Solutions	Sunfer	-	-	-	-	-			
		Solutions	Sunfer	-	-	-	-	-			
		Solutions	Sunfer	-	-	-	-	-			
		Solutions	Sunfer	-	-	-	-	-			
		Solutions	Sunf e r	-	-	-	-	-			
		Solutions	Sunfer	-	-	-	-				
	EMENT 1 (10 ud.)	Structures	Sunfer	-	-	€ 219,87	12960	-			



1.2.2 New Product Window

SUNFER			۵
C Products	Cencel Seve product		
Create product		Price definition	
	Product name * Provider reference Distributor reference	Product unit cost *	€
Drag documents here	Product sheet	Apply a personalized margin	
⊜ (↑)	Product description' Specifications	Product margin	%
٢		Apply VAT	
List of allowed automismup ng. jpg. jt	Select category 💌 Add Select manufacturer 🖤 Add	product VAT	*
Product image			

0	₩ SUNFER						4
0 0	Products					Cencel Seve product	
		Poduct name * OlV teje Product sheet Product skeviston* Soporte coplanar continuo atomilado		Provider reference	Distributor reference		Price definition Product unit cost * 0.00 c 0.00 personalized margin Product margin 0.00 % 0.00 % margin 1.00 % 0.00 % % 1.00 %
	List of allowed extensions: png, jpg, jpeg	Select category Solutions	▼ Add	Select manufacturer Sunfer	X 👻 Add		0.00 % Sales price (incl. VAT) € 0,00
	Additional information Data 0 Data 1 Of/ Desa 1 Of/ Desa 2 Soporte coplanar continuo atornilado	Product Information				Specify Pric	e
	Data 3 Data 4 Data 5 Data 6						

Once all desired fields have been filled in, click on Save Product.



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7

1.3 Projects

en ny tany	ER
🕼 Translate	
ᢙ Dashboard	
🛱 Partners	PROJECTS
Products	0, 100, 250 of 28 Total items
📝 Layouts	Address
😂 Projects	Usmino de la Luía sin". Estasses lastratival, 4007 Altanta las la Prima Stat
Settings	Paparas -

ER							۵
						+ Cree	ate project
PROJECTS							
0, 100, 250 of 28 Total it	ems					Display by Created at	t 👻 In order descending 👻
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	València, Valencia, España	Jaime de Miguei	0400	Penuing	29-11-2022	14-12-2022	
AR CALLE OSLO 350	C. Oslo, 6, 45600 Talavera de la Reina, Toledo, España	Patricio Wenziner	2240	Pending	03-11-2022	03-11-2022	
COSLADA	C. de Antonio Machado, 1, 28822 Coslada Madrid España	Patricio Wenziner	4080	Pending	03-11-2022	03-11-2022	



Editing Project Properties

EK						
						+ Creste pr
PROJECTS						
0, 100, 250 of 28 Total items						Display by Created at 👻
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n vii Alv Tar	igno choir at rial 2000. Gial de la Ribero, Valeman, Mais	Maria Datherà		00.01.0000	Luithanis	
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COSLADA C. d 288	de Antonio Machado, 1, 322 Coslada, Madrid, España	Patricio Wenziner		14 12 2022	Duplicate	03-11-2022
				14-12-2022		
				14-12-2022	Delete	

In the upper right margin, we find three small dots in each project. If we click on them, an expandable menu will open where we can edit the project, change the project name, change the project status, share the project, duplicate or delete it.

×
Δ
ancel Submit

Menu to change status of the project



1.3.1 Create a New Project

Click on the "Create project" button, located in the upper right.

			4						
		+ Creat	e project						
	Display by Created at 👻 In order descending 👻								
-	Created at	Updated at	Shared						
	10 02 2023	10 02 2003							
	17-01-2020	17-01-2023							
	02-01-2020	02-03-27-23							
	16-12-2022	10-12-2020							

Assign the project a name and click "submit".

•	₩ SUNFER								۵
۵ ۵								+ Creete project	
÷	Items per page 25,50, ID0, 250 of 2 Tota	litems						ay by Created at 👻 In order	descending 👻
			Creator	Power		Sharer company	Created at	Updated at	
8	PERSON NO		trank on	-	Freedord	une sea com	HUHAND	- 2404-0405	
٢	Autor of	te din Hartzfaren bernet 1,4 % i de bie hart ge	and a low to a second		by any	34/0182	2404.007	and the second	
			Create project	X X Cancel Submit					





Project name sample	Project location	~	Address (optional))
How would you like to design?				
Different options are available to perfor	m a design, based on a map o	or based on n	umber of panels in the sys	tem, please
choose the one that best suits you.		12 48	ii	
	0-		-	50
	Contraction of the local division of the loc	and and a		
	Carl Carl Carl		1	
			1 	1

In this step, we select the installation country and the address. We can also put (in the Address field) the name of the site we are searching for and the address will be auto-filled. For example, in place of typing out the entire address of Sunfer, we can simply put "Sunfer" and it will give us the correct address.

At the bottom of the prompt, we can select how we would like to create our design.

We have a few options when designing, such as placing our panels over a satellite map. Choose the option that is best for your needs.

• <u>Simple Mode:</u>

This mode has a reduced set of tools and disactivates 3D by default to help carry out a simple, fast project.

• <u>Satellite Images:</u>

The background shows a map which allows you to work directly on top of a real view of the location.

White Map:

The background is white with a simple grid.



2. Workspace Window

Once the project has been assigned a name, an address, and a design mode, the workspace window will open.



In the centre workspace, if satellite images was chosen, we see the map and can use it as a guide to draw the installation perimeter.



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In the right side there is a menu consisting of a series of tabs:

- Workspace
- Buildings
- Roofs
- Obstacles
- Systems



Summary Information





2.1 Workspace

- **Project Information:** (Project name, address) •
- Panel Model: This allows us to choose the size of the panels from • the list. More sizes can be added as needed.
- Structures Provider: Sunfer
- Workspace Limits: We can adjust the resolution of the map. •

Project information	~
Workspace Limits	~
Ambient settings	? ^
Surrounding	
1	×
Wind zone	
26.0 m/s	· · · · · · · · · · · · · · · · · · ·
Snow zone	
V	· · · · · · · · · · · · · · · · · · ·
Height above sea	
12.3	

• Ambient Settings: (click on the question mark? to access help)

- Choose the terrain category.
- Choose the Wind Zone.
- Choose the Snow Zone.
- Input the altitude above sea level (in metres).

Indicate if the environment is corrosive or not.



Project information	^
Project name	
Sample	
Address Camino de la Dula s/nº Poligono	
Industrial, 46687 Albalat de la Ribera, Valencia, España	
Module model	
Módulo 2100x1050x30/45	\sim
Structures provider	
Sunfer	~
Workspace Limits	\sim
Ambient settings	\sim

Workspace



2.2 Buildings

Draw an outline of the roof on which we wish to create a design.





Building 1:

Define the gutter of the building Input the height of the gutter

Define the ridge of the roof (if there is a ridge along an exterior edge) Input the height of the ridge

When starting to draw, we must begin along the longest side of the building.

Ridge height 5.00	_ <u>m ~</u>
Allow irregular angles	0
Allow modules in this building	

Allow irregular angles:

When activated, non-right angles will be allowed between points, which allows for the creation of any angle between 0 and 360 degrees.

Allow modules in this building:

When not activated, we can draw an adjacent building in which we are not going to place panels, but that we want to cast a shadow.





P4 Nutomático

5



Continue

Back

Ways of Drawing:

We can draw in different ways, using lines, vertices, or distances.





LINES

In LINES, if we have "Snap to guides" enabled, after drawing the first line, orthogonal guides will be shown based off of said line.

To disable Snap, we can either disactivate the "Snap to guides" button, or press the S key, and we will be allowed to move freely around the drawing space and place non-orthogonal points.



"Snap to guides" - Enabled



"Snap to guides" - Disabled



VERTICES

Allows placement of random points without snapping to guides.



DISTANCES

Place points at a specific distance from the previous point.





2.2.2 Modifying/Adjusting points



Select a point to modify and move it (keeping the mouse button pressed) until the point is in the desired position, then release the mouse button.

Deleting a point



To delete a point, right-click the point in question and select Delete point.



Finalizing the drawing



2.2.3 Modifying/Editing drawing

۵	sample ⊉		Language English – United Kingdom ^(*)
2	BO1 +	WORKSPACE BUILT	DINGS ROOFS OBSTACLES SYSTEMS
★remu		© 	Buildings Total modules: 0 Total power: 0 Wp Create building 1 Point Private 200 m

Editing menu for drawings:

Edit, move, remove, clone, y change styles of buildings.

We can access this menu whenever we want simply by clicking the BUILDINGS tab.

	WORKSPACE	BUILDINGS ROOFS OBSTAC	LES SYSTEMS
	0	Buildings Total modules: O Total powe	r: O Wp
		Building 1 Ridge height 5.00	
NA SA			Edit Drawing



Clone building





We can create an exact copy of our work in another part of the project by pressing the clone button. We can then place the copy wherever we want, complete with any included obstacles or installations.





2.2.4 Adding a building

Once we have a building created, we can add more to the same job by clicking the Create building button



We follow the same steps as before to define our new roof.





2.3 Roofs

2.3.1 Defining the type of roof



Roof types



! (Not yet available in this version!)

2.3.2 Roof Specifications

	0	Roof 1: Pent Total modules: O Total power: O Wp	
24:		Roof shape	^
	-	Roof type	\triangle
	R	Pent	~
		Interact with the roof's vertices and edges to adjust them.	
100	100.00	Roof inclination	
110	1.1.1.2	30.00	
- View	6 10.0	Ridge height	
N/AC	-	5.00 m	~
J.	l î î	Roof specifications	\sim
1200		Structure	\sim

Material category:





Tile

Metal

	Roof 1: Pent Total modules: O Total power: O Wp	
	Roof shape	\sim
	Roof specifications	^
↗	Material category	♪
	Tile	~
	Roof material	⊿
	Mixed flat roof tile	~
	Structure	\sim



WORKSPACE B	Roof 1: Pent	SYSTEMS		
	Total modules: O Total power: O Wp Roof shape Roof type Pent		Roof 1: Pent Total modules: O Total power: O Wp Roof shape	~
	Interact with the roof's vertices edges to adjust them. Roof inclination 30.00	and 🔬	Roof specifications Material category Metal	~
	Ridge height 5.00 Roof specifications Structure	m ~	Roof material Plain corrugated sheet	 ~

Roofing material (Tile):











Slate roof

tile



Mixed flat roof tile

Mixed Curved curved Arabian roof tile tile

Curved Flat roof Arabian roof tile

Concrete roof tile

Imitacion roof tile

Roofing material (Metal):







sheet

Corrugated





Plain corrugated sheet

Sandwich sheet

Standing seam

Imitation tile



2.3.3 Structure

Structure for tile roofs

	Roof 1: Pent			
	Total modules: O Total pow	er: O Wp	Roof shape	\sim
to, il	Roof shape	^	Roof specifications	\sim
	Roof type		Structure	^
	Pent	~	Fixation	0
	Interact with the roof's edges to adjust them.	vertices and	Drill tile () Shingle
	Roof inclination		Substructure	
3.	30.00		Concrete slab	~
	Ridge height		Concrete thickness	
	5.00		100.0	mm v 💿

Substructure – Concrete

After selecting concrete slab, we can specify the thickness of the concrete.

Roof shape		\sim
Roof specifications		\sim
Structure		^
Fixation		(?)
Drill tile	O Shingle	
Substructure		
Concrete slab		~

Roof 1: Pent Total modules: O Total power: O	Wp
Roof shape	\sim
Roof specifications	\sim
Structure	^
Fixation Drill tile 	③ Shingle
Substructure Concrete slab	~
Concrete thickness 100.0	. <u>mm ~</u> ③



Substructure - Beam

After selecting **beam** we can choose if we will be drilling into the beam or clamping to it.

Roof shape	\sim
Roof specifications	~
Structure	~
Fixation	0
Orill tile	Shingle
Substructure	
Concrete slab	~

Roof 1: Pent Total modules: O Total power: O Wp	
Roof shape	~
Roof specifications	\sim
Structure	^
Fixation	0
Drill tile	
Substructure	
Beam	~
Beam material	
Steel	~
Distance between beams	
1000.0 mm ~	0
Beam height	
150.0 mm ~	0
Beam width	
150.0 mm v	0
Drill structure	0
Drill beam Clamp bean	n

Structure for metal roofs



Roof shape	\sim
	Ť
Roof specifications	~
Structure	^
Sheet thickness	
0.5	<u>mm ~</u> ③
Distance between fretworks	
150.0	<u>mm ~</u> ③
Fretwork height	
30.0	<u>mm ~</u> ③
Fretwork width	
20.0	<u>mm ~</u> ③
Anchorage	
Belt	~
Belt material	
Steel	



Anchorage (Fastening of Supports)

Roof shape		\sim
Roof specifications		\sim
Structure		^
Sheet thickness		
0.5	<u>mm ~</u>	(?)
Distance between fretworks		
150.0	mm ~	(?)
Fretwork height		
30.0	mm ~	(?)
Fretwork width		
20.0	mm v	(?
Anchorage		
Metal sheet		\sim

Specifying the fastening of the supports:

We can choose between anchoring supports to **metal sheet** or to **belts** (purlins).

If we choose the option to anchor supports to **metal sheet**, we are then given two options for profile type: **Continuous** or **Microrail**

Roof 1: Pent Total modules: O Total power: O Wp		
Roof shape		\sim
Roof specifications		\sim
Structure		^
Sheet thickness		
0.5	mm ~	(?)
Distance between fretworks		
150.0	mm ~	0
Fretwork height		
30.0	mm ~	0
Fretwork width		
20.0	mm ~	0
Anchorage		
Belt		~
Belt material		
Steel	~	(?)
Distance between belts		
1200.0	mm v	0

If we choose the option to anchor supports to **belts** (purlins) we are given options to specify the purlin **material** and the purlin gauge/distance.



2.3.4 Ridge

When selecting the shape of the roof to be Gabled, Hipped, or Pyramidal, we can define the location of the roof's ridge/peak.









Roof orientation		
East/West	South/North	
Interact with the roo edges to adjust the	of's vertices and m.	
Roof inclination		
30.00		
Ridge height		
5.00	<u>m </u>	
Roof specifications	\sim	
Structure	~	
Roof orientation	\triangle	



Y 29







Pyramid





Moving the ridge

To move the ridge, select a point and drag it with the left mouse button held down.



Finish drawing:

and the second se		B (1 B)	
		Roof 1: Pent Total modules: O Total power: O Wp	
240		Roof shape	^
132		Roof type	⊿
	-	Pent	~
		Interact with the roof's vertices and edges to adjust them.	
the second second			
192		Roof inclination	
I.		Roof inclination 30.00	4
1		Roof inclination 30.00 Ridge height	
1		Roof inclination 30.00 Ridge height 5.00	
10	-	Roof inclination 30.00 Ridge height 5.00 m Roof specifications	~

Enter the roof inclination (pitch) in degrees and the height of the roof ridge in meters. Choose the roof material under roof specifications, and then in structure, fill the required fields.

Once everything is configured - Finish





2.3.5 Flat Roof (Not yet available in this version)

When it comes to configuring a flat roof, the characteristics of the roof itself and the underlying structure are different than those of a pitched roof, and there are other parameters to take into account.

Tejado 1: Plano Módulos totales: O Potencia Total: O Wp	
Forma del tejado 🔨 🔿	
Tipo de tejado 🖉	
Plano V	
Interactua con los vertices y las aristas del tejado para poder ajustarlo. Altura de la cumbrera 5,00 m ~	L H
Características del tejado 🛛 🗸	
Estructura V	
JP	
Características del tejado plano:	
Tejado 1: Plano Módulos totales: O Potercia Total: @Wa	Flat roof material category:
Forma del tejado	
Características del tejado 🔨	Concrete Metal Membrane
Categoría de material	
Hormigón	Flat roof material
Material del tejado	
Pavimento ~	
Estructura V	Pavement Landscaped Gravel



Flat roof structure:





2.4 Obstacles

Define or create obstacles such as skylights, chimneys, or even tall trees that could cast shadows over the installation. Obstacles which define an area that the installation must keep out of are here called "keepouts."



Draw the obstacle outline



Vertical obstacle







Coplanar obstacle (Example: Skylight)



Adding a Tree:







Tree Obstacle in place



The obstacle types we've placed are distributed like so.

If an obstacle identical to an existing obstacle is needed, we can clone it using the copy button.



2.5 Systems



We will now add solar panels to the installation.

After double clicking, a grid of all possible panel locations will appear.

۵	ample III D	Language English – United Kingdom ⁷⁷
2	Summary information v	UILDINGS ROOFS OBSTACLES SYSTEMS
E Q	Editig Debut Stateward	Bytem Column Col
W SUNFER	Den auber es vier	Back Continue

Select the desired panels by holding the left mouse button and dragging. Selected panels will appear as above until the button is released.





To deselect panels, left-click on the existing panels you wish to remove. They will appear as above until the button is released.

Automatic Selection



Clicking on this button will enable or disable all possible panels.







Different Ways to Select or Deselect Panels

- 1. Pressing the left mouse button will activate/deactivate a panel.
- 2. Holding down the left mouse button and dragging will activate/deactivate a group of panels.
- 3. Holding CTRL and clicking a panel will activate the entire column (vertical) of panels.
- 4. Holding SHIFT and clicking a panel will activate/deactivate the entire row (horizontal) of panels.
- 5. Pressing both SHIFT and CTRL and then clicking any panel will activate/deactivate all panels.













Expansion/Dilatation Lines

Expansion lines are imaginary boundaries that we must keep in mind when designing an installation that denote where joints must be placed to allow for thermal expansion and contraction of the support structures. Sunfer recommends never exceeding 20 m in continuous row length without expansion joints.



Vertical (x) and horizontal (y) expansion/dilatation lines

	~
Dilatation lines anabled	
Dilatation lines enabled	
Dilatation lines column offset	
0	
Dilatation lines row offset	
0	
Maximum space without dilatations in x	
20.00	<u>m</u> ~
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10.00	m ~
Vartical dilatation width	
0.50	m v
Horizontal dilatation height	m
0.50	· · · · ·
structure	\sim

Dilatation Line (x) Dilatation Line (y) Dilatation of the dilatation lines will dictate the layout of the panels, and so it is recommended to locate the lines before placing the panels. The XY orientation of the lines is driven by the panel orientation. For a coplanar installation using the microrail system, it is not necessary to

consider dilatation lines, since there is no continuous structure. However, attention should still be paid to panel spacing for allowing room to provide maintenance.



Modifying the distances between lines



When modifying the distance from 20 to 15 metres between lines, note that we will need to reorganize the layout of our panels.

Expansion/dilatation lines are recommended to be at least 15cm wide. These gaps are often made wider still and used as maintenance aisles between rows.



Origin point (0,0) of the expansion lines

۵	sample இ			E	nguage Iglish - United Kingdom
2	Summary informati	2n √.	WORKSPACE	BUILDINGS ROOFS	OBSTACLES SYSTEMS
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	-	Dilatation lines		^	~
		Dilatation lines enable	oled		enabled
	100	Dilatation lines column offse O	et		s offset
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		Dilatation Line Maximum space without dil 20.00	atations in y	<u>m ~</u>	~
		Open subares view Vertical dilatation width O.15		<u>m ~</u>	
¥ISUNFER	Savinghayout	Horizontal dilatation height 0.15		m v	Continue
Th p	oint wł	here the layout of panels begins. Can be offset.		~	

Final Layout of Panels



Once the layout of panels is finalized, we can always go back to adding or deleting panels simply by double-clicking on the workspace image.



Area Margins

It is recommended to leave a safety margin around the installation to avoid excessive wind uplift in the most vulnerable points.



Structure

	System 🖉	9
	Default Subarea 1 Total modules: O Total power: O Wp	
«	Click the modules on the workspace of use the shortcuts to activate or deactivate them. You can setup the settings in this panel.	pr
	C 👪 💠 🞯	
	Modules	\sim
	Dilatation lines	\sim
	Structure	^
	Coating Raw aluminium	~
	Profile length Short 2350 mm	~
	Design wind speed 150.0 km/h ~	. 7

Define the aluminum finish, the size of the profile, and the designed-for windspeed.

Design windspeed automatically defaults to the loads prescribed by the CTE (building codes).

We can modify this parameter. If we increase the value, the program will add more anchor points. If we lower the value below default, we will see an error message in red that says, "The value is lower than the recommended."

Once we have located all the desired panels and specified the correct parameters, we can press Continue.



Creating a subarea



Define the new subarea. In this case we've applied a safety margin of 0,5m.



With a double click over the image, we can place modules. In this case, we've placed them in a different orientation from the rest of the modules to illustrate that with subareas, we can have many different installations in the same roof.



Calculating Shadows and Irradiation

As an optional step, we can carry out a study of shadows and radiation, which will tell us the predicted performance of each panel.



Roof Shadow Analysis





Shadow Simulation – Sun Simulator



We can calculate the simulation of the sun and its position as a function of whatever time and date that we need, as well as check the longest and shortest shadows for the year.

In the following image, we can see a scenario where we may want to check the irradiation of an area where shadows may be cast and see how the anticipated performance may be affected.

74%	66%	64%	61%	59%	61%	
69%	62%	54%	54%	50%	47%	
66%	58%	47%	46%	35%	34%	
66%	55%	38%	36%			



For this type of example module arrangement and its defined parameters, Sunfer offers three possible solutions for which we can consult technical datasheets (by clicking "see technical sheet")



Downloading Sunfer's technical datasheets





Technical datasheets will open in a new window, permitting us to download them and figure out which solution is the best for our installation. The datasheets are available in several languages.



Changing the azimuth of the modules



Rotate the orientation arrow by dragging with the left mouse button pressed.







Moving the modules



Keeping the left mouse button pressed, we can drag the modules anywhere within the defined roof area.

Changing the building





Building 1

Building 2 (The underline shows which building is currently active)



3. List and Budget of the job

Adding Service Products (Structural)

奋	Example	IJ	ľ			
	Summary infor	mation \checkmark				
×	Add Extra	a Product	Add Service Proc	ducts Add Custo	m Product	
E	lcon	Name		Product Sheet	Unit Cost	Provider Reference
PDF	•	Módulo 2000	0x1000x30/45	-	0,00€	-

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Click on the plus sign to add additional units.

Adding a New Product





Service products list			_						× P	
Reference Icon	Name		Category	Manufacturer Unit Price	Quantity	Calculate Quantity?	Total Quan	ntity I	Î VA	
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	*	W45	Modules	Sunfer	0,00 €	0	(†) o			
	•	D/45	Modules	Sunfer	0,00 €	0	(±) o		1.5	
	•	/45	Modules	Sunfer	0,00 €	0	(± o		1.5	
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13041	50	SO2.4.(10.ud.)	Structures	Sunfer	125,97 €	0	• o		1.5	
		48V	Solutions	Sunfer	0,00 €	0	+ о		1.5	
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Add Extr	Add Extre Product Add Service Products Add Custom Product											
lcon	Name	Product Sheet	Unit Cost	Provider Reference	Quantity	Extra Quantity	Total Quantity	VAT Applied	Original Margin	Price		
S .	Módulo Trina Vertex S DEO9R.05	Link	500,00€	Vertex S DEO9R.05 MBB, 405–425W	78	2	80	21,00 %	10,00 %	44.444,45 €		
ø	Profile G3 L=2350mm (1 ud.)	Link	22,15 €	12585	72	50	122	0,00 %	0,00 %	2.702,30 €		
Ø	UG3 (2 ud.)	Link	6,18 €	12460	18	0	18	0,00 %	0,00 %	111,24 €		
T	S11.1 (10 ud.)	Link	14,86 €	12449	8	0	8	0,00 %	0,00 %	118,88 €		
	S10.1 (10 ud.)	Link	25,38€	12444	3	0	3	0,00 %	0,00 %	76,14 €		
	S10.1 (50 ud.)	Link	111,87 €	12445	1	0	1	0,00 %	0,00 %	111,87 €		
,0	S46 (100 ud.)	Link	11,94 €	12607	2	0	2	0,00 %	0,00 %	23,88 €		

The underlined fields can be modified directly, such as Extra Quantity, VAT Applied, Original Margin, or even Price.

Once all fields are adjusted as desired, we can click Next.

20 15,96 € - 20 36,98 € - 20 163,48 € - Final price (no VAT) € 6.213,26 Final price without VAT Wp Q.05 €/Wp Final price Wp Q.05 €/Wp Q.05 €/Wp	1 Product modified by user	Next	
0 15,96 € - 0 36,98 € - 0 36,98 € - 0 163,48 € -		,	
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	015,96 € -	Final price (no VAT)	€ 6.213,26



4. Project Report



Generating/Downloading the Project Report

Example C		Language English - United Kingdom
© Summary information ~		
IE Reports list	preview (Project report)	Generate Report
Name P Date		Language English – United Kingdom 🤟
Project report	SUNFER	
	Solar photovoltaic installation project	eview
	LOCATION: Camino de la Dula s/nº, Poligono Industrial, 46687 Albalat de la Ribera, Valencia, España	
Альни	Page 1 / 16 - Q +	Generate



To download the report, click the icon.



This will open the report in PDF format in a new tab, where it can be fully previewed. To download the file, click on the Open icon in the top right.



Another new tab will open where we can download the complete report.





Example of a Project Report









Selected Solution



Implementation Plan





Summary



Economic Valuation	
W SUNFER	all all
Economic valuation	C I
REFERENCE: 468 Sunfer would like to present our economic valuation for the sup	ply of the material necessary for
the execution of this project. The following table shows the break	down of prices:
Base price (no VAT)	€ 6.213,26
Prices of extras (no VAT)	€ 0,00
Discount %	0 %
Total price (no VAT)	€ 6.213,26
Final price Wp	0.05€/Wp
Sunfer Energy Comina de la Dulo, SN 46897 - Abacil de la Ribeira Valencia (Spain) 96 249 23 22	

Material List

Name	Pack	No. of	Total	Price/pack	Total
		packages	quantity		price
\$05 (2 ud.)	2	5	10	€11,47	€ 57,35
\$05 (25 ud.)	25	36	900	€ 131,67	€ 4.740,1
\$11 (2 ud.)	2	1	2	€ 3,57	€ 3,57
\$11 (10 ud.)	10	8	80	€ 16,65	€ 133,20
\$11 (100 ud.)	100	7	700	€ 151,80	€ 1.062,6
\$10 (2 ud.)	2	4	8	€ 3,99	€ 15,96
\$10 (10 ud.)	10	2	20	€ 18,49	€ 36,98
\$10 (50 ud.)	50	2	100	€81,74	€ 163,48

Technical Datasheets







5. Logging Out

We can also logout so that other users may start their own projects. To log out, go to the main platform page, and hover the cursor over the user icon. A pop out menu will appear, where we can then click our username. Another menu will lower, from which we can click Sign Out.





6. Exiting the Application

To terminate the program, it is sufficient to simply close the browser window.

7. Troubleshooting

If any doubts arise or any problem with your project... we can help you.

You just need to share the project and get in contact with us, and one of our technicians will help you resolve your issue. And how might you do that?

Well, easily...

Access the main menu and click on Projects. From there, find your project. At the aright of the screen, you will see three small dots in the Shared column. Click these dots, and then select **Share with Parent Company**.





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