

INSTALLATION MANUAL SOPRASOLAR® FIX EVO



■ Soprasolar® Fix Evo ■



■ Soprasolar® Fix Evo 10 ■

CONTENTS

1	TECHNICAL FEATURES:	3
1.1	PRESCRIPTION OF ROOFING MATERIALS.....	3
1.2	LOAD:	3
1.3	TYPE OF SUITABLE MODULES	4
2	STEP 1: GETTING PREPARED	4
2.1	Description of the components	4
2.2	Tools for application	5
3	STEP 2 : APPLICATION OF THE FEET	5
3.1	Positioning of the feet : Soprasolar® Fix Evo	5
3.2	Positioning of the feet : Soprasolar® Fix Evo 10	5
3.3	Welding of the feet	6
3.3.1	Define the area to be torched on with the spatula	6
3.3.2	Blacken the area where the foot will be located	6
3.4	Picture of the job before the modules.....	7
3.4.1	Installation of the raisers and the blockers.....	8
4	STEP 4 : APPLICATION OF THE MODULES	8
4.1	Cable runaway management.....	8
5	GLOBAL VIEW OF THE SYSTEM	9

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The Soprasolar® Fix Evo solution consists in installing crystalline photovoltaic modules on SOPREMA modified-bitumen roofing materials with:

- no penetration
- no ballast

The Soprasolar FIX EVO is divided into 2 versions:

- Soprasolar® Fix Evo with modules installed up to a 2° angle
- Soprasolar® Fix Evo 10° with modules installed at a 10° angle, both in landscape and portrait, according to the **location of the job** and the **prescription of the solar panel manufacturer**.

1 TECHNICAL FEATURES:

1.1 PRESCRIPTION OF THE ROOFING MATERIALS

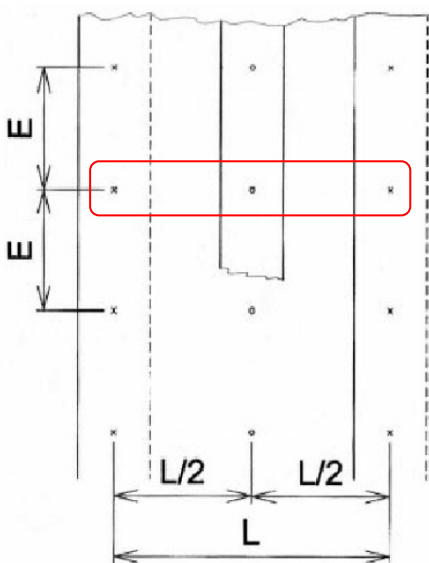
The solution has been tested to be applied on **SOPREMA APP** and SBS roofing materials with

- 180g/m² for the cap sheet in case of a 2-layer system
- 4mm membrane in case of a single layer system

The solution is ideal up to a 10% slope (angle of the roof).

The solution comes with

- Fully adherent system.
- Semi-adherent system:
- For mechanically fastened solutions:



- The density of fastenings has to be calculated according to the wind zone of the project.
An intermediate range of fastenings must be added in the middle of the under-layer membrane with the same center distance as for the overlaps (see picture below). The fastenings must be covered with a piece of roofing material.
- The top layer has to be fully torched on the underlayer.



1.2 LOAD:

The solution can fit on steel, concrete and wood decks, as long as the prescriptions above on insulation/roofing materials are followed.

The extra-load of the system is between **14-16 daN/m²** with a standard crystalline module (1,6m²). Apart from the weight of the **Soprasolar® Fix Evo** system, it is important to take into account as well the wind and snow load on the solar construction. A stability study must be performed.

The development of the Soprasolar® Fix Evo system has been tested in a variety of conditions including wind uplift tests up to 200 km/hr.

1.3 TYPE OF SUITABLE MODULES

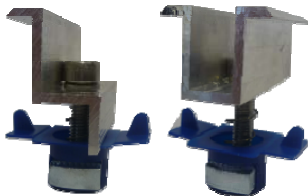
- All the tests on our system have been performed with conventional PV modules (1,6m² / 1 X 1,6m - IEC 61646/61215 & IEC 61730).
- For other use, a proper study should be performed.

2 STEP 1: GETTING PREPARED

2.1 Description of the components



- **Soprasolar[®] Fix Evo Foot**
Foot in polyamide adjustable in height (from 120-160mm) fastened on an SEBS piece of bitumen roofing membrane (250g/m²)



- **Intermediate & Final Clamps**
Global clamp kits, ready to install



- **PV Module**
Standard framed PV module

Optional:

In order to install tilted modules on the Soprasolar[®] Fix Evo solution: use the upper and lower raisers as well as the blocker.



- **Upper And Lower Raisers**
To be installed on the Soprasolar FIX EVO feet. Does create a 10° angle on the module



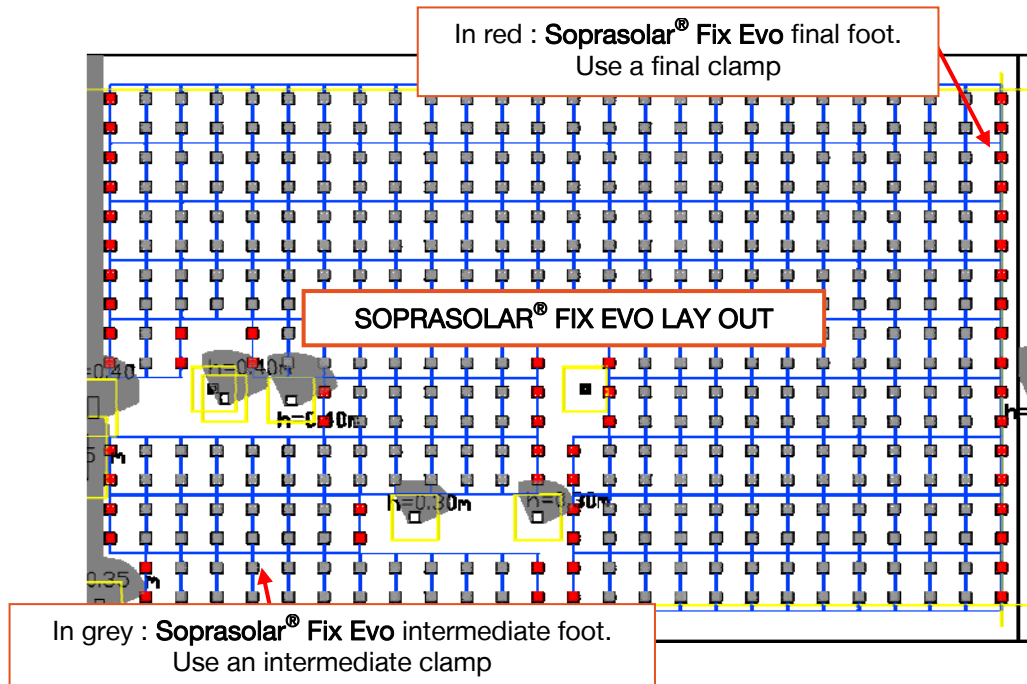
- **Raiser Blocker**
Block the raisers on the foot

2.2 Tools for application

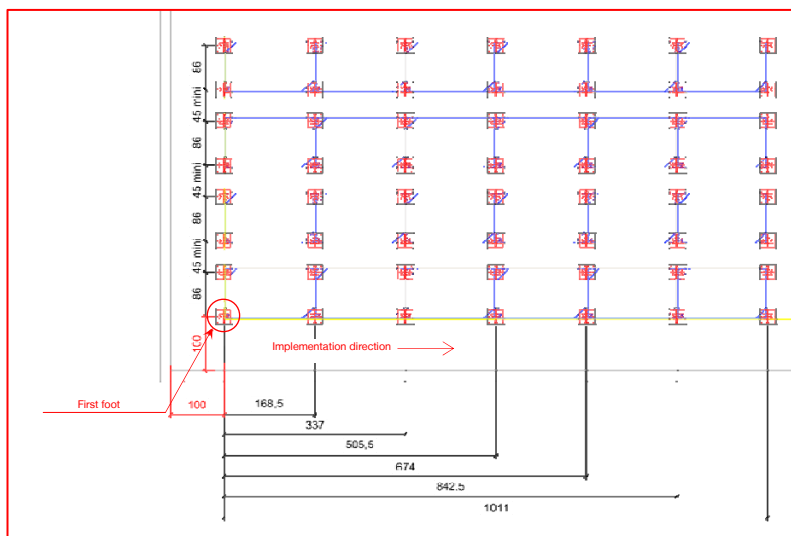
- Standard roofers tools

3 STEP 2 : APPLICATION OF THE FEET

3.1 Positioning of the feet : Soprasolar® Fix Evo



3.2 Positioning of the feet : Soprasolar® Fix Evo 10



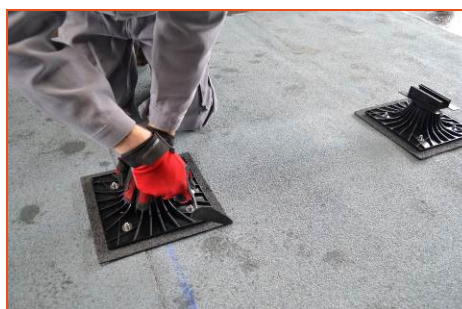
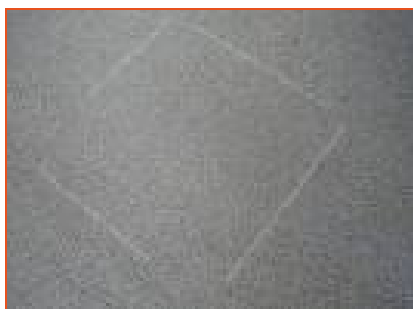


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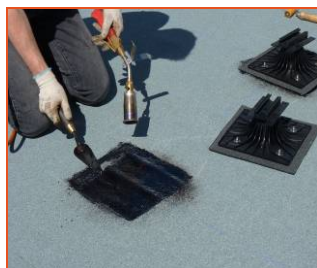
After having carefully read the lay out provided:
■ draw on the upper layer the location of the foot
This will allow the right positioning of the feet

3.3 Welding of the feet

3.3.1 Define the area to be torched on with the spatula



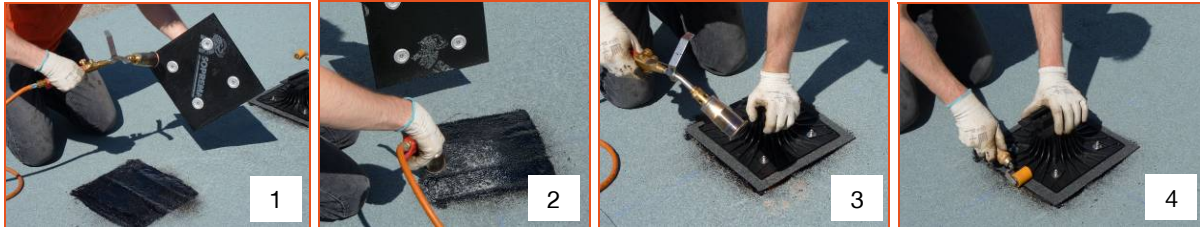
3.3.2 Blacken the area where the foot will be located



(!): CAUTION: the surface of the membrane shall be cleared of slates in order to warrant the right adhesion of the foot

Application Video: <https://www.youtube.com/watch?v=ftJ-Z4MmHzs&feature=youtu.be>

Fully torch on the manchette on the blackened area of the upper layer



- Confirm the edge of the manchette to make sure it is well done



- Insert the clamp on the top of the foot



3.4 Picture of the job before the modules



3.4.1 *Installation of the raisers and the blockers*



- For every foot :
 - Installation of the raisers
 - Installation of the cover
 - Installation of the blocker

Application video: <https://www.youtube.com/watch?v=Bwd7PMBnyco>

- Insert clamps on the raisers



4 STEP 4 : APPLICATION OF THE MODULES

Important :

- It is mandatory to have the electrician on the site for this step.

4.1 Cable runaway management

- The connectors can be tied to the foot (see picture above)

! Neither cable nor connectors must stand on the roofing materials !



- Screw the final and intermediate clamp with a couple of tightening of 14N.m.



5 GLOBAL VIEW OF THE SYSTEM



Questionnaire for the study of a project

To be completed for a project study. Information to be supplied to your waterproofing contractor.
Online version available on www.soprasolar.com



information required

Identification of requester

Name: _____ Business: _____
 Name of requester*: _____ Firstname: _____
 Position: _____ Address: _____
 Post code: _____ Town: _____
 Phone*: _____ Fax: _____ Email*: _____

Identification of project

Designation of project*: _____ Power (kWp or kWh): _____
 Architect : _____
 Project manager: _____ Project owner: _____
 Location* (post code + town): _____
 Date of start of work*: _____

Information about the roofing

please could you provide a layout plan with directions and the location of obstacles (skylights, chimneys, piping etc.) **and state their height.** (the plan may be sent by email in .dwg format)

Renovation* or new*

Supporting element*: _____

Peak load of the roof (kg/m²): _____ Sense of the beams: _____

Slope*: _____ % (up to 60 %) Sense of slope: _____

Total area* (m²): _____ Length* (m): _____ width* (m): _____

Elements liable to cast shadows* (trees, chimneys, skylights, parapets etc.): _____

Please state the location and height of obstacles*: _____

Other information: _____

Environment (provide pictures if possible)

Approximate roof height (m): _____ Exposure of the relevant building : _____

Altitude of the worksite: _____ Distance to the sea (as the crow flies): _____

Wind zone classification: _____ Snow classification: _____

Other buildings above the relevant roof* ? Yes No Distance + height: _____

Accessibility of worksite (delivery, assembly): _____

(in absence of the information, the offer shall be based on delivery by semitrailer)

Presence of a utility connection terminal to the low-voltage electricity network*:

Yes distance from building (m): _____ No

Please enclose the technical files and the data sheets of the photovoltaic panel if different from the proposition **SOLARDIS**.

Please circle the sketch or sketches that you think are the most representative :

