SOPRASOLAR

MANAGEMENT
OF THE SOLAR
ENERGY

INSTALLATION MANUAL
SOPRASOLAR® FIX EVO TILT

SOPREMA
GROUPE

SOPRASOLAR®

CONTENTS

TECHNICAL FEATURES

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 Tilt** 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.

PRESCRIPTION OF THE ROOFING MATERIALS

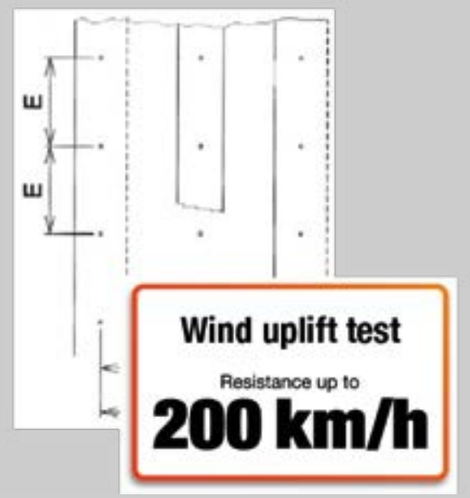
The solution has been tested to be applied on **SOPREMA** APP and SBS roofing materials with :

- 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 I wind zone of the project.

An intermediate range of fastenings must be added in the middle of the under-layer membrane with the same centre 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.

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.

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.

STEP 1 :
GETTING PREPARED

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).

Upper And Lower Raisers
To be installed on the **Soprasolar® Fix Evo** feet. Does create a 10° angle on the module.

Intermediate & Final Clamps
Global clamp kits, ready to install

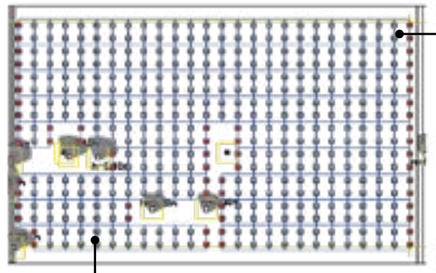
Raiser Blocker
Block the raisers on the foot

Photovoltaic Module
Standard framed photovoltaic 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.

STEP 2 : APPLICATION OF THE FEET

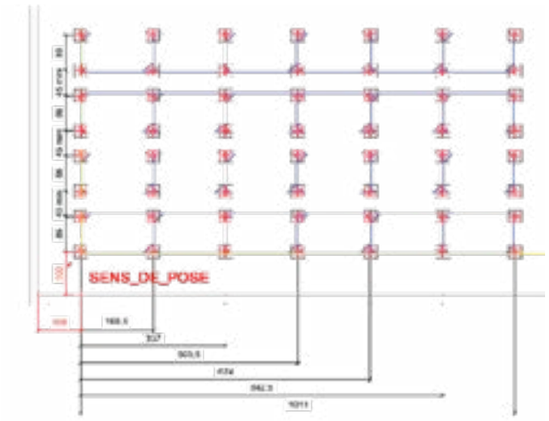
POSITIONING OF THE FEET : SOPRASOLAR® FIX EVO



In red : Soprasolar® Fix Evo final foot.
Use a final clamp

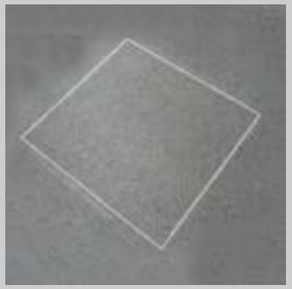
In grey : Soprasolar® Fix Evo intermediate foot.
Use an intermediate clamp

POSITIONING OF THE FEET : SOPRASOLAR® FIX EVO TILT



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.

WELDING OF THE FEET



1- Define the area to be torched on with the spatulaa

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.

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.

STEP 2 : APPLICATION OF THE FEET

INSTALLATION OF THE RAISERS AND THE BLOCKERS

1- For every foot :
- Installation of the raisers ;
- Installation of the cover ;
- Installation of the blocker.

2- Insert clamps on the raisers.

STEP 3 : APPLICATION OF THE MODULES

IMPORTANT

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

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.

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: _____ Adress: _____
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 :

SOPRASOLAR® at your listen

You are interested by **SOPRASOLAR®** and **FLAGSOLAR®** systems**?**
Our teams accompany you in your project :
study, training, and support on site, technical assistance, ...
We are at your side to bring energy to your roofs!

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Please find all information on **SOPRASOLAR®** and **FLAGSOLAR®** on **www.soprasolar.com**

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