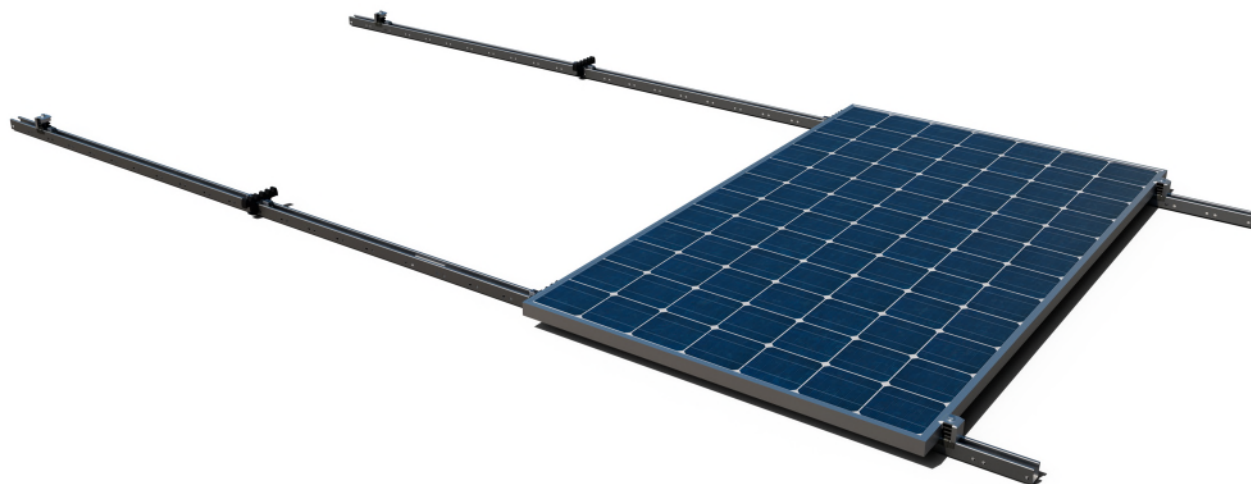


SC-GSC

SYSTEM DESCRIPTION

Coplanar mounting system with CL-GS "Clamp for fixing solar panels by clipping", for installation of solar panels.



1. CHARACTERISTICS

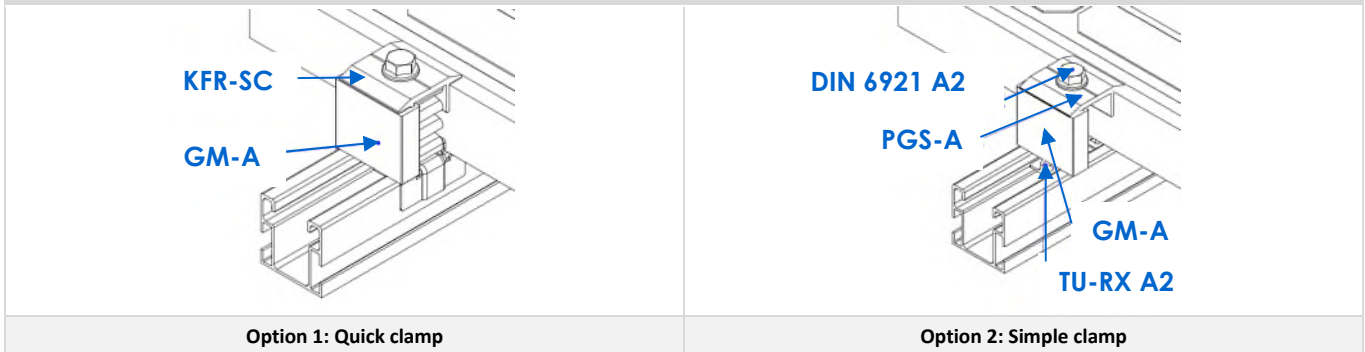
Description:	Coplanar mounting system using an anchoring system by clipping the panels together.
System inclination:	Coplanar mounting with parallel installation to the roof surface.
System orientation:	Facing SOUTH, EAST OR WEST depending on the roof orientation.
System materials:	Steel, stainless steel and EPDM.
Warranty:	Until 10 years depending on environmental conditions (excluding environments exposed to hydrogen sulphide). The warranty is only valid if the complete SC-GPD system is used.
Compatible solar panels:	
Solar panels type:	Solar panels with frame height between 30mm and 40mm.
Solar panels orientation:	Mounting orientation of landscape (horizontal) panels.
Solar panel size	Adaptable to standard market sizes.
Application area:	
Application area:	Sloping roofs.
Roof slope:	Installation on pitched roofs, slope between 10° and 60°.
Wind load:	Up to 240 km/h. The structure and fixing must be calculated according to local and roof conditions.
Snow load:	Up to 2 kN/m ² . The structure and fixing must be calculated according to local and roof conditions.

2. COMPONENTS

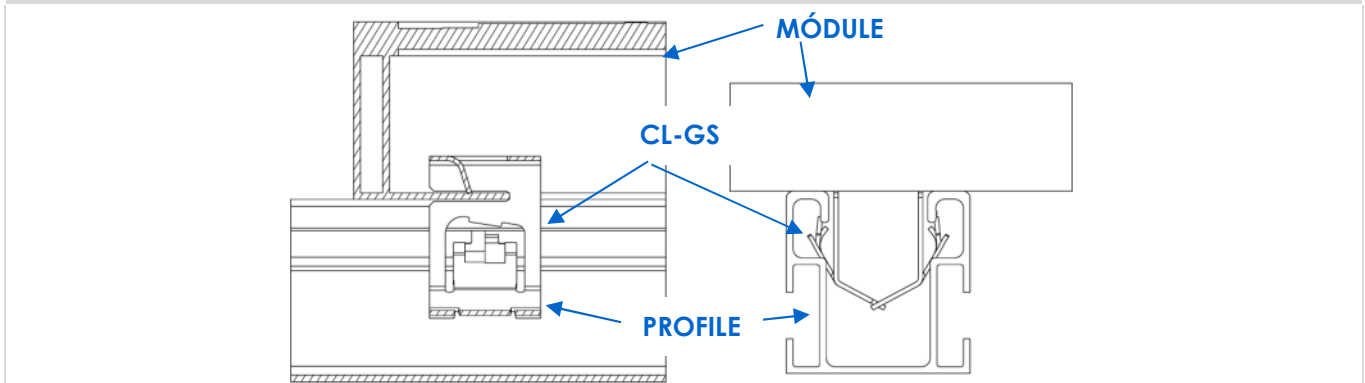
Quick pre-assembled clamp		Simple clamp		INDEXTRUT quick nut		Gauge for solar frame		Clamp for fixing solar panels by clamping		Panel separation rubber for clip CL-GS		removal tool for solar fixing clips CL	
KFR-SC		PGS-A		TU-RXA2		GM-A		CL-GS		CL-PG		CL-EX	

2.1 Components: Clamps y gauges for mounting solar panels

Lateral position clamp



Clip-on clamp



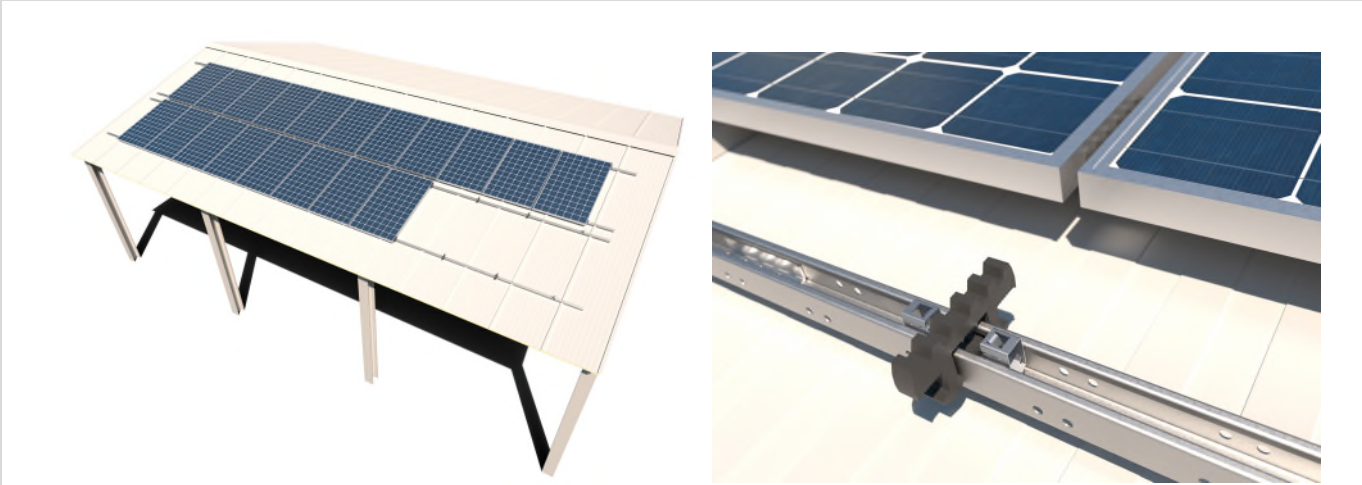
Profiles compatible with the clip and its removal tool

GP-XS: INDEXTRUT solar perforated guide. Atlantis C4-M steel.	GP-VD: INDEXTRUT solar perforated guide for fixing in discontinuous valley. Atlantis C4-M steel.	
PSE-C: Aluminium profile for side mounting.	PSA-A: Winged aluminum profile.	PSA-AV: Aluminium profile with wings for discontinuous direct valley fixing.

**The following manual explains how to assemble the clamps for the solar panels and their accessories. In case you need help in the assembly and fixing of the profile, please refer to the assembly manuals of each profile with which this system is compatible.

4. EXAMPLES OF APPLICATION

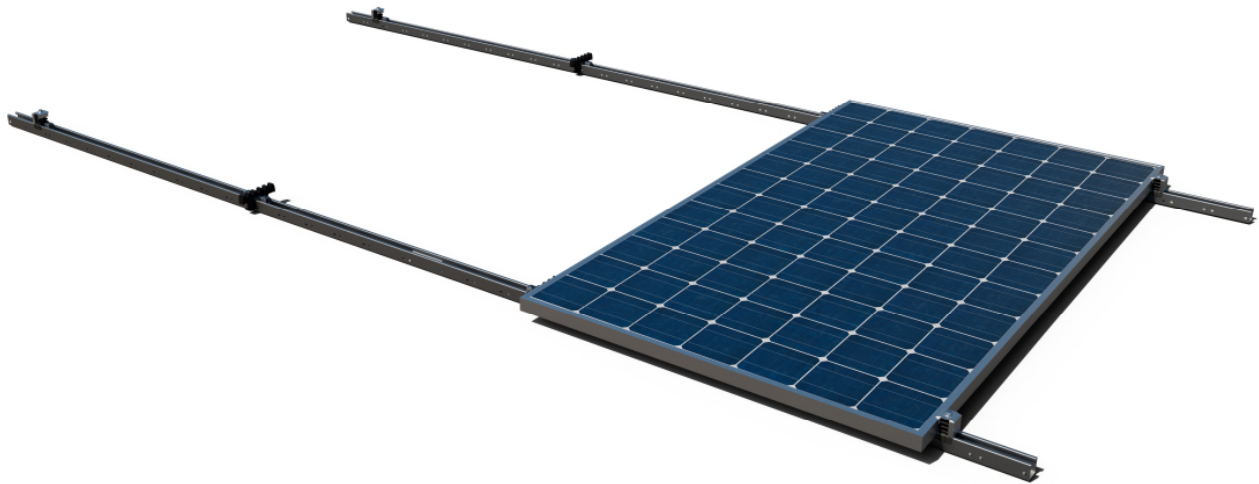
Example of the placement of the modules



5. INSTALLATION MANUAL

SC-GSC

Coplanar mounting system with CL-GS "Clamp for fixing solar panels by clipping", for installation of solar panels.



Read these installation instructions before starting installation and familiarise yourself with the system components. Installation must only be carried out by qualified and experienced personnel.

Installation guidelines:

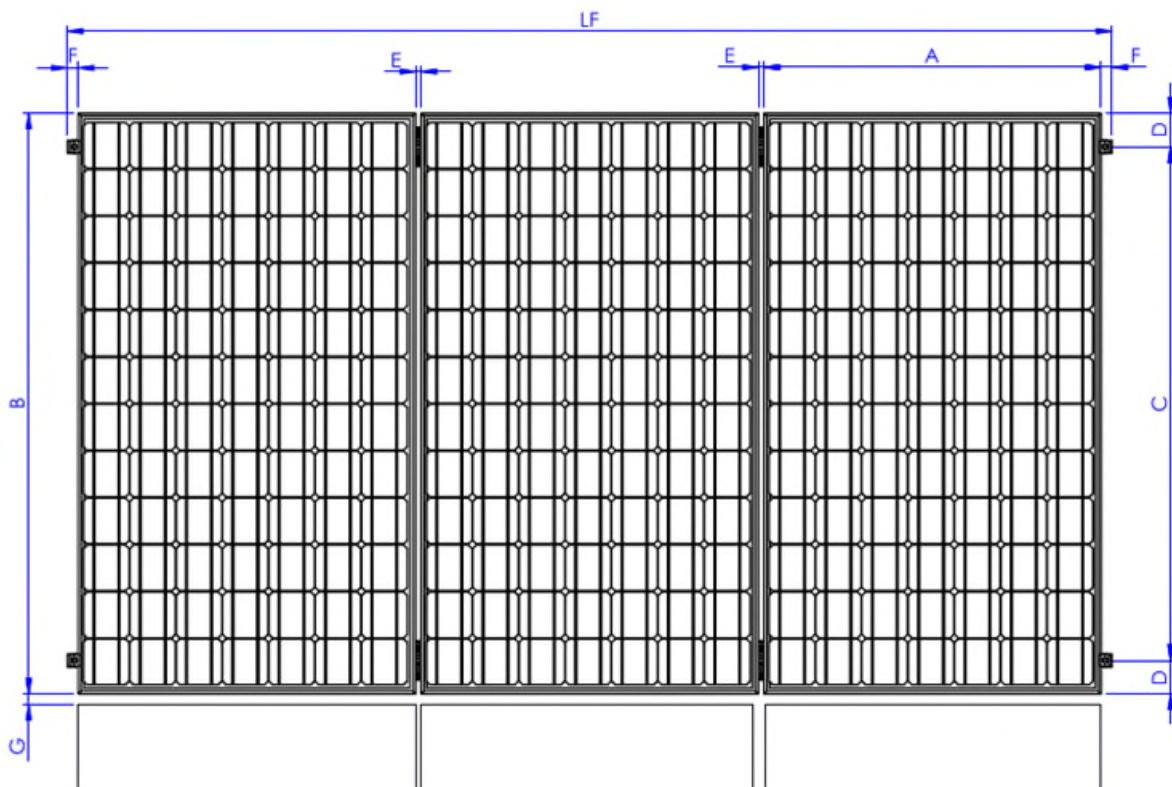
- Ensure that the roof construction is suitable for the introduction of forces at the fixing points and their subsequent transmission. The building must be able to safely receive the additional loads.
- A structural calculation must be carried out based on the local conditions at the installation site.
- The planning of the layout of the fixing points must be adapted to the requirements of the system and the roof.
- To compensate for thermal expansion, include a spacing every 12m when planning the PV system.
- The solar modules must be installed according to the manufacturer's instructions.
- Follow your local building regulations.
- Make sure to work in accordance with the health and safety regulations in force in your region, during installation and during roof work
- Do not use the system or fixings as stairs.

PROCESO DE INSTALACIÓN:

STEP 1.- Consult installation drawing

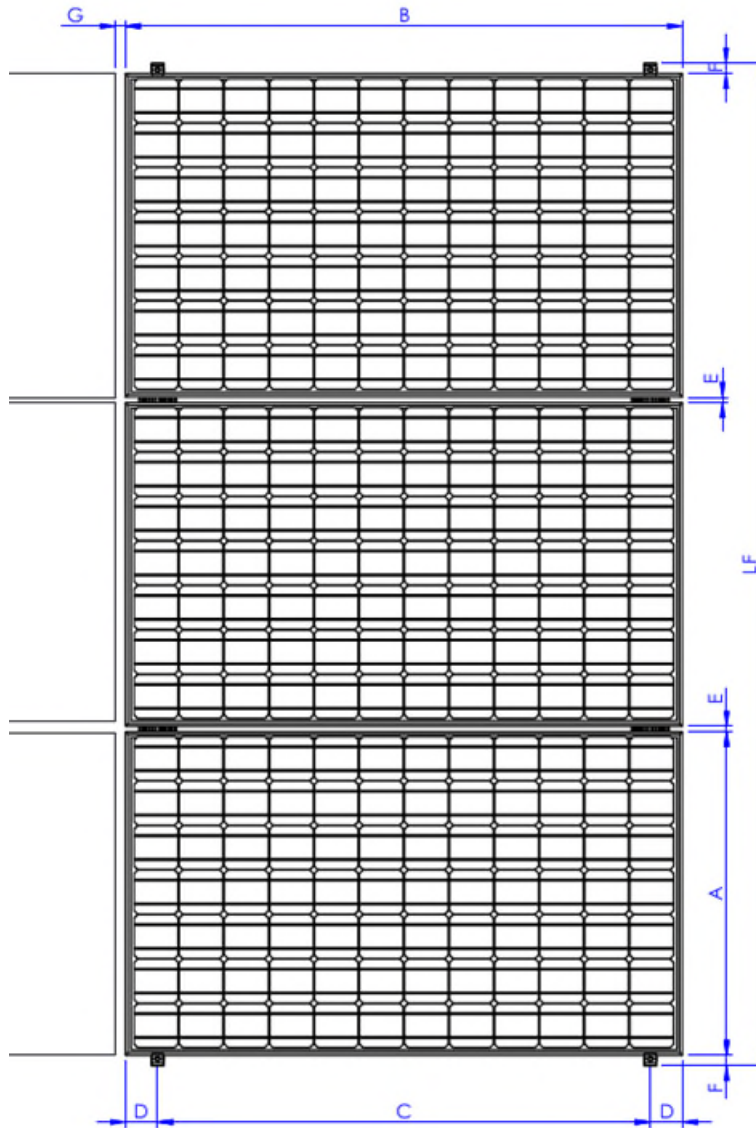
Consult the installation drawing on the roof, where the distribution of the modules is defined as well as the structures that support them and their fixing points.

- A. Plan view of SC-GPD system with horizontal module orientation (landscape type).



C	D	E (mm)	F (mm)	G (mm)	LF
$0,7B \leq C \leq 0,5B$	$(B-C) / 2$	20	min 36	min 20	$(n * B) + ((n-1) * E) + (2 * F)$
C: consult the module manufacturer's recommendations.					
n: number of modules in the row.					

B. Plan view of SC-GSC system with horizontal module orientation (landscape type).

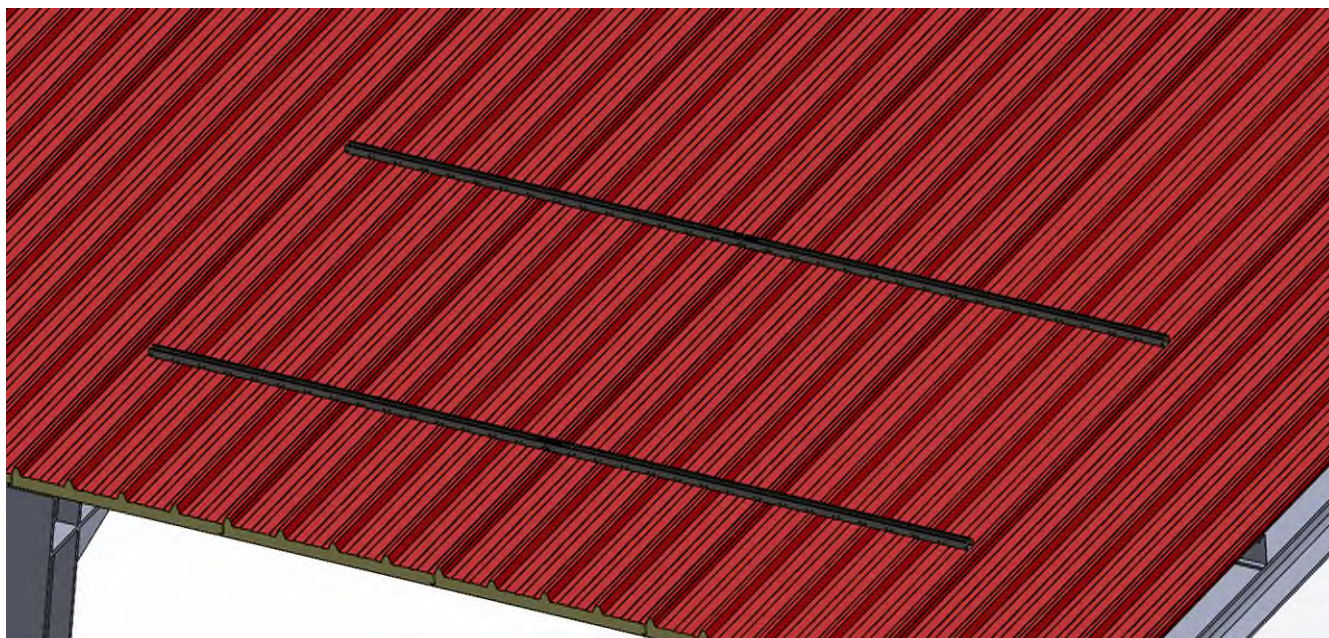


C	D	E (mm)	F (mm)	G (mm)	LF
$0,7B \leq C \leq 0,5B$	$(B-C) / 2$	26	min 35	min 20	$(n*B) + ((n-1) * E) + (2*F)$
C: consult the module manufacturer's recommendations.					
n: number of modules in the row.					

The type of fixing system and the location of its installation points shall be adapted to the needs of the supporting structures and at the same time to the needs of the roofs where they must be installed.

STEP 2.- Positioning the profiles on the roof.

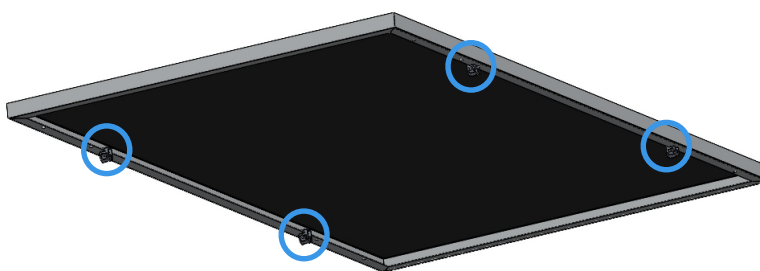
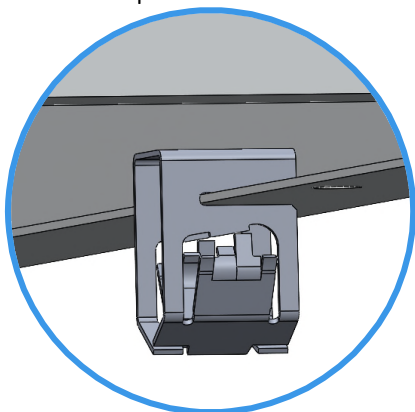
Each of our profiles has an assembly manual on our website, please refer to it for correct assembly. The placement of the clamp is the same for all profiles compatible with it.



STEP 3.- Installing the clamp on the modules

Insert clamp into the module frame. The upper flange must scratch part of the frame to fix its position and prevent it from being easily removed.

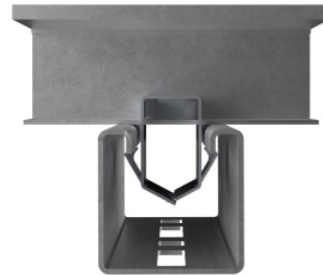
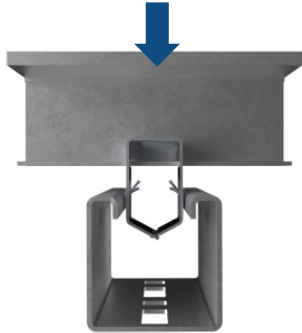
Insert four clamps so that the module can be anchored at four points on the frame.



It is important that the clamp's entry touches the frame and that the clamp does not touch any holes in the frame when fastened.

STEP 4.- Installing the module in the profile

Steps to install the module with the clamps already in place:



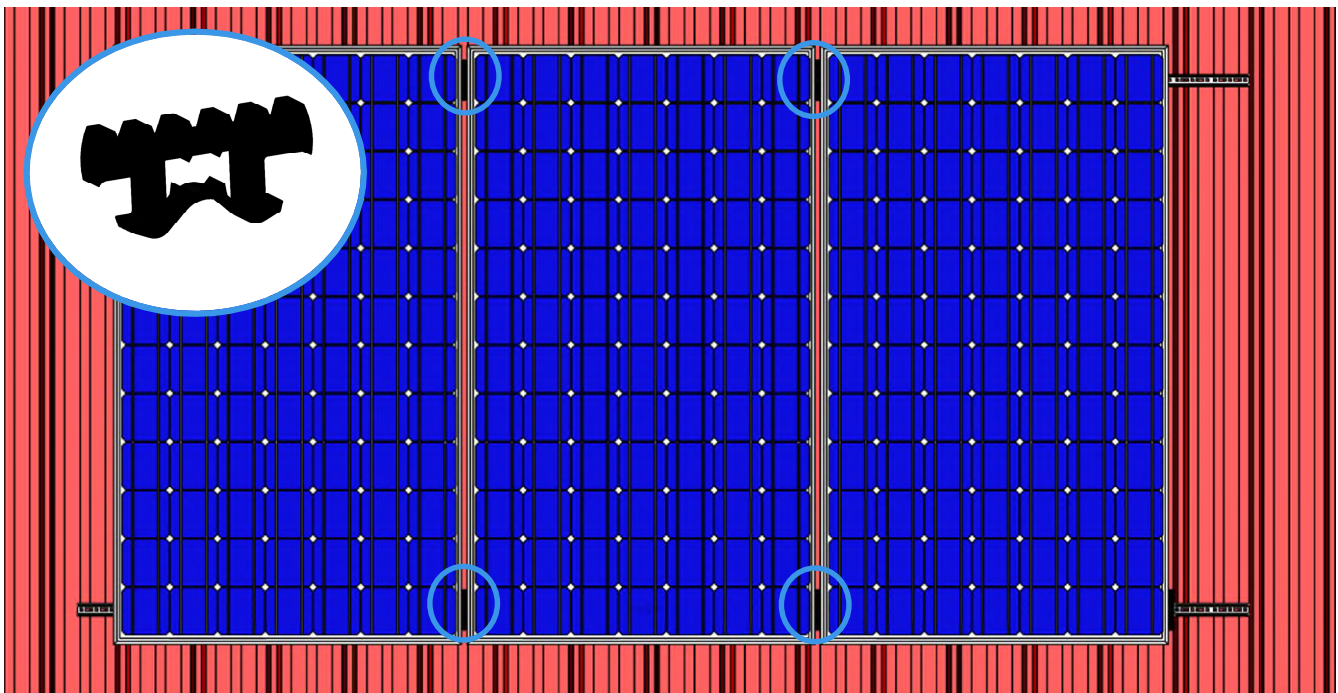
1. Press the panel (with the clamp already fixed) on the profile where you want to anchor it until you hear a click for each of the clamps on the module.

2. It is important to check that the module is properly anchored by pulling it out and to visually check that the clamp is correctly fitted into the profiles.

STEP 5.- Installation of the rubber separator

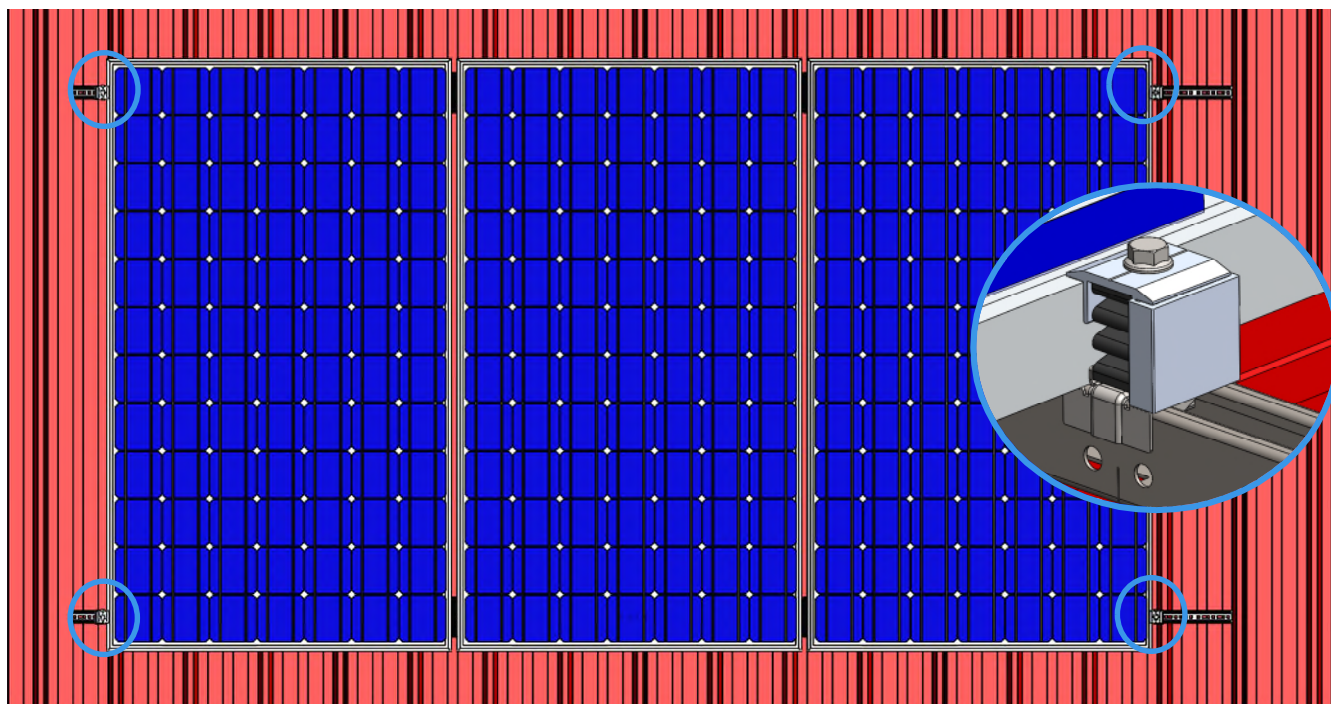
It is necessary to leave a separation between panels and to prevent the modules from moving, the separation rubber is placed.

This rubber is placed on the profile by means of pressure, it is necessary to place two, one for each profile.



STEP 6.- Installation of side clamps at the perimeter

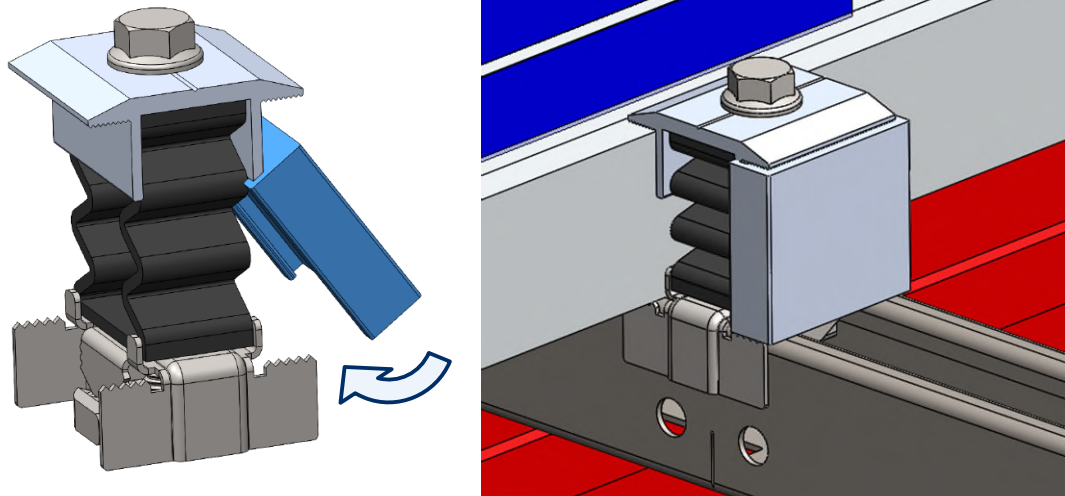
To ensure that the modules maintain their correct position, it is necessary to mount the KFR-SC clamp (quick fixing clamp) on the sides of the module rows.



To mount the clamp on the guides, the following steps are necessary:

<p>1. Place the clamp in the guide with the lower nut parallel to the guide.</p>	<p>2. To fix the clamp to the guide, the lower nut must be turned perpendicular to the guide by means of the screw, the screw head is pressed down and turned. The nut has a serrated rail to secure the fixing.</p>	<p>3. Insert the corresponding elements, two panels in the case of an intermediate clamp, or a panel and a gauge in the case of a lateral clamp.</p>	<p>4. To fix the inserted elements it is necessary to turn the screw until they meet the guide. Check that the lower nut remains perpendicular to the guide.</p>

Prepare 4 KFRSC3050 quick fixing clamps to be mounted at the ends of each row of panels. Each of these clamps is fitted with a GM-A gauge, mounted as shown in the figure:



The chosen gauge size must be equal to the frame height of the modules to be installed.

STEP 7.- Removing the clamp

In case the panel needs to be removed for maintenance, these clamps can be dismantled with specific tools.

Steps to remove the clamp:

<p>1. Place the tool inside the rail near the clamp to be removed.</p>	<p>2. Use force to open the rail and allow the clamp to spring out of position.</p>	<p>3. Proceed in the same way with the remaining clamps of the module.</p>	<p>4. Using a flat-head screwdriver, lift the upper flange that scratches the frame and remove the clamp.</p>

STEP 8.- Mounting accessories

ACCESSORY 1: Clip for earthing cable

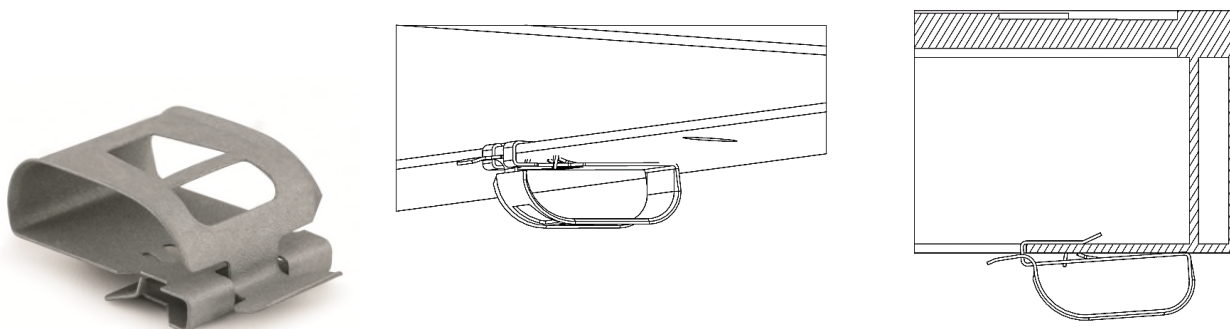
A single action allows the earth wire to be stripped, electrically connected and fitted in one easy step, while installed on the PV module frame.

Installation process:

<p>1. Insert the cable into the clip in the central part.</p>	<p>2. Use force to open the rail and allow the clamp to spring out of position.</p>	<p>3. Proceed in the same way with the remaining clamps of the module.</p>	<p>4. Using a flat-head screwdriver, lift the upper flange that scratches the frame and remove the clamp.</p>

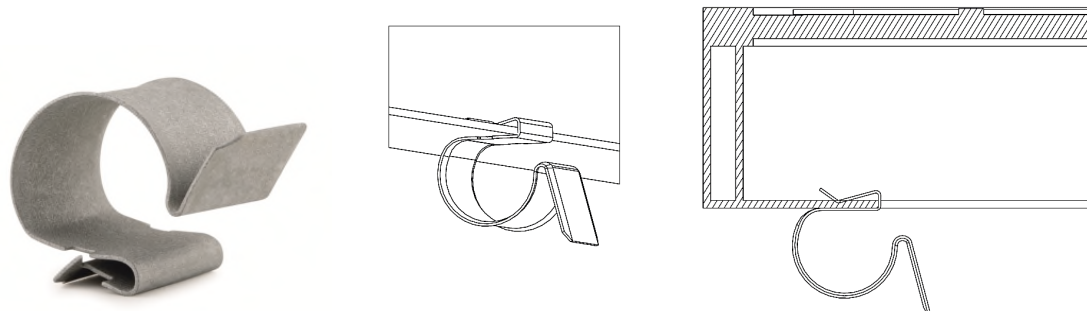
ACCESSORY 2: Multi-cable clip for PV modules

It is used for fixing multi-cables for photovoltaic modules. It is attached to the modules by scratching the surface of the frame with two nails in the clipping area.



ACCESSORY 3: Cable connector clip for photovoltaic modules

It is used for fixing the connector for photovoltaic modules. It is attached to the modules by scratching the surface of the frame with two nails in the clipping area.



For more information on the accessories, please refer to their data sheets on the website.