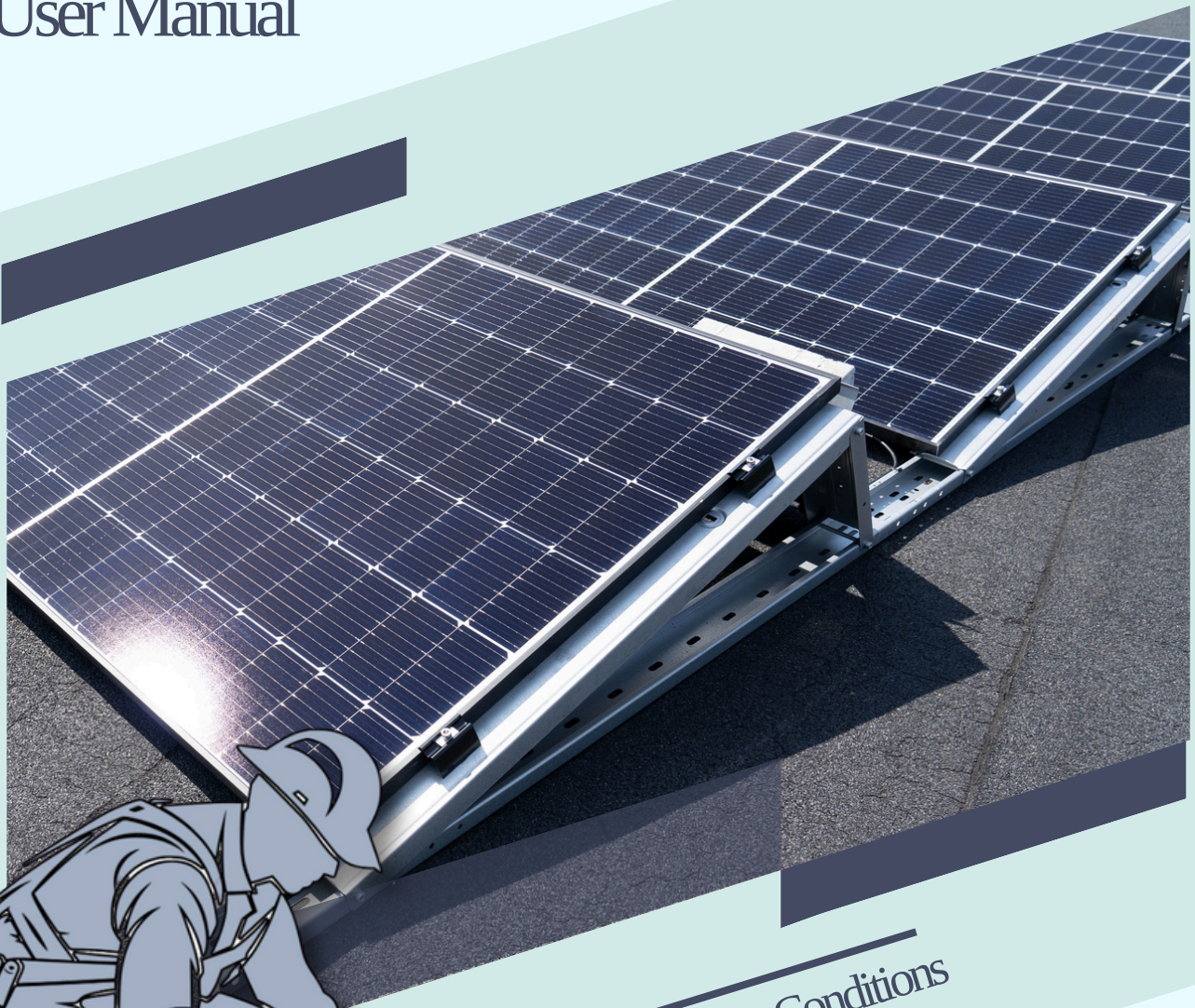


# Moisolar

User Manual



Designed for Nordic Conditions

## **NORDIC FLAT**

### **South 15 Landscape**

Quick & Easy to Install | 35 Years of Material Warranty | Durable



+358 45 787 53966



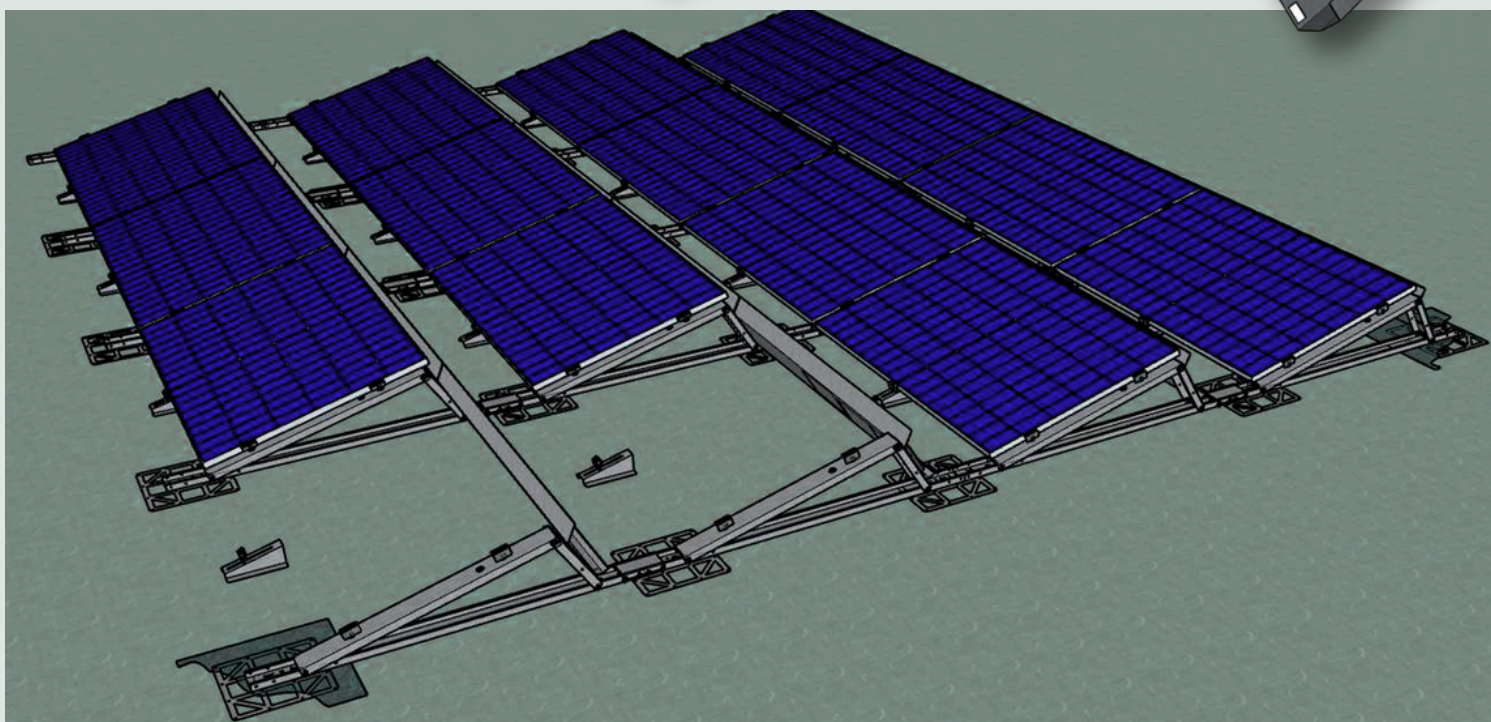
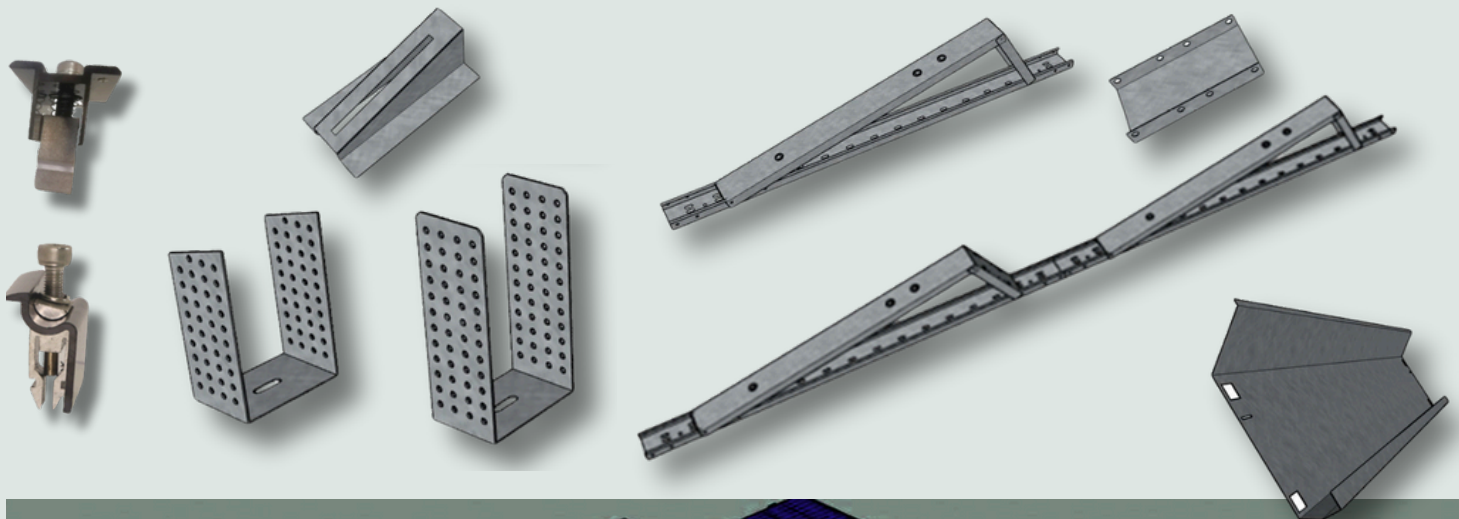
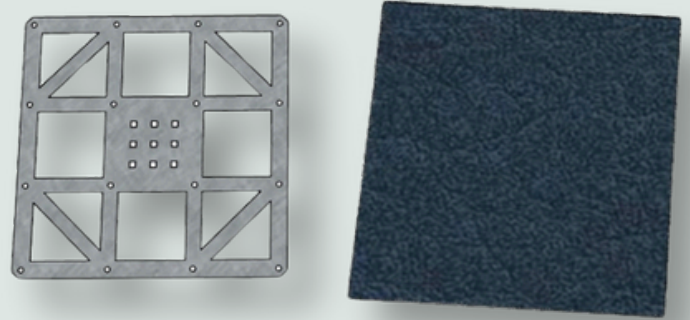
info@moisolar.com



moisolar.com

## Installation Instructions

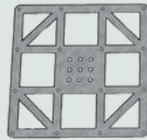
- With the NORDIC FLAT S15L system, the panels are installed horizontally.
- To reduce wind load, it is most advantageous to install the panels in the southern central area of the roof.
- The system can be stabilized with weights and/or the bitum welding method.
- We provide an installation-specific wind load calculation and additional weight placement advice.



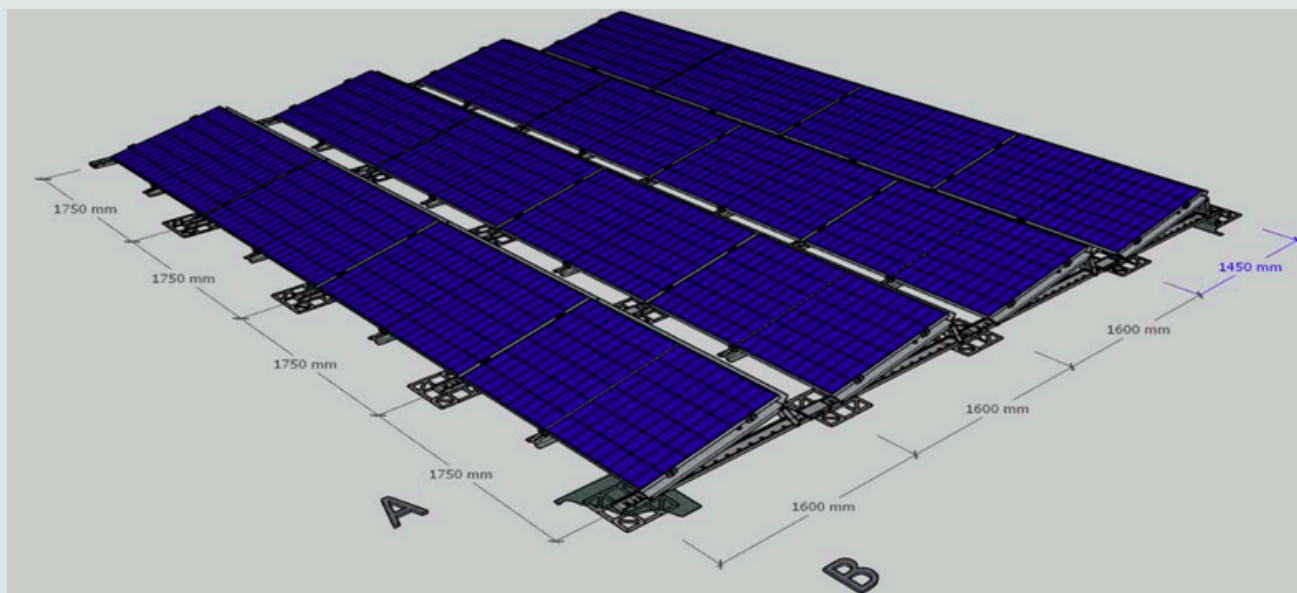
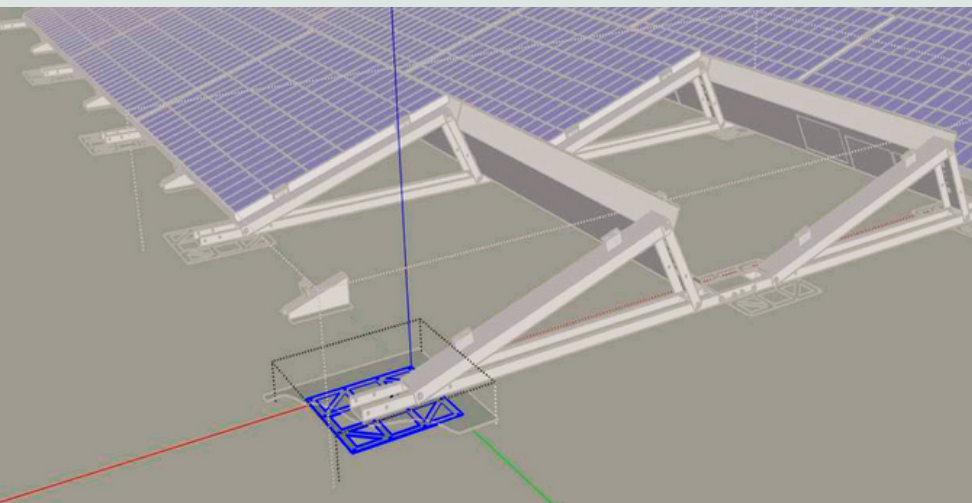
## Design

The most economical placement and fastening method is selected for the site. The most economical fastening option is selected for each panel based on the wind load calculation.

## Base Plate FP01

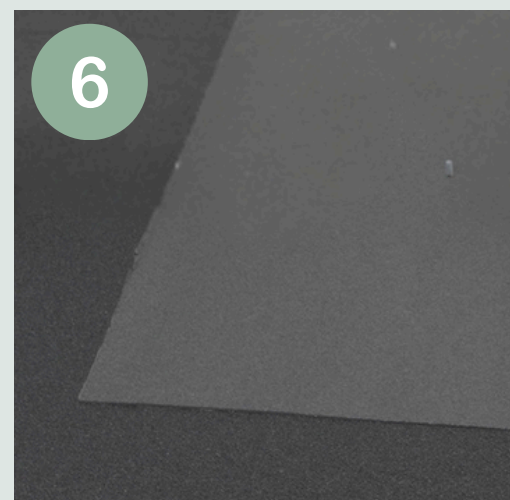
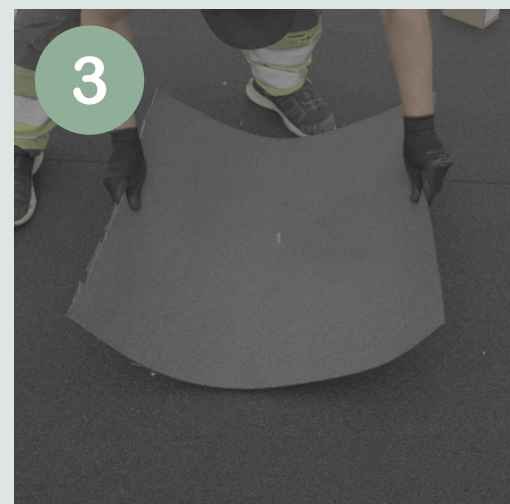
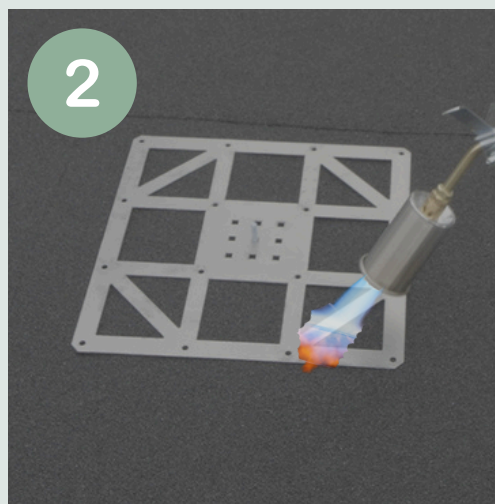
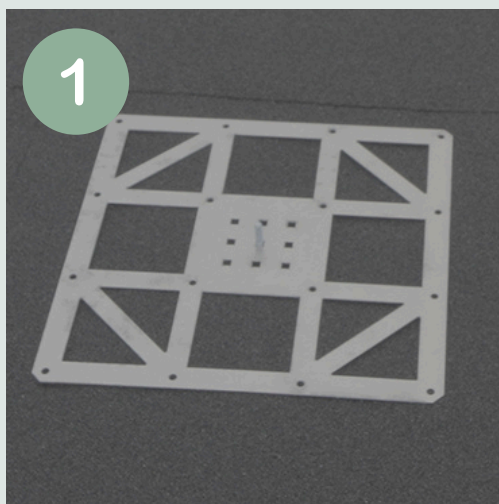


When the plan is ready, the placement and installation of the base plates begin. The plates are placed so that the widthwise **distance A** is the length of the panel + 20 mm. The lengthwise **distance B** is 160-165 cm, except for the last row 145. The distances are calculated from the middle of the plate, where the bolt-nut set FS02 is placed. A bonding mat is selected according to the roof material (e.g. a piece of felt for a felt roof). The mat is glued onto the base plate to the roof surface so that the bolt remains visible.



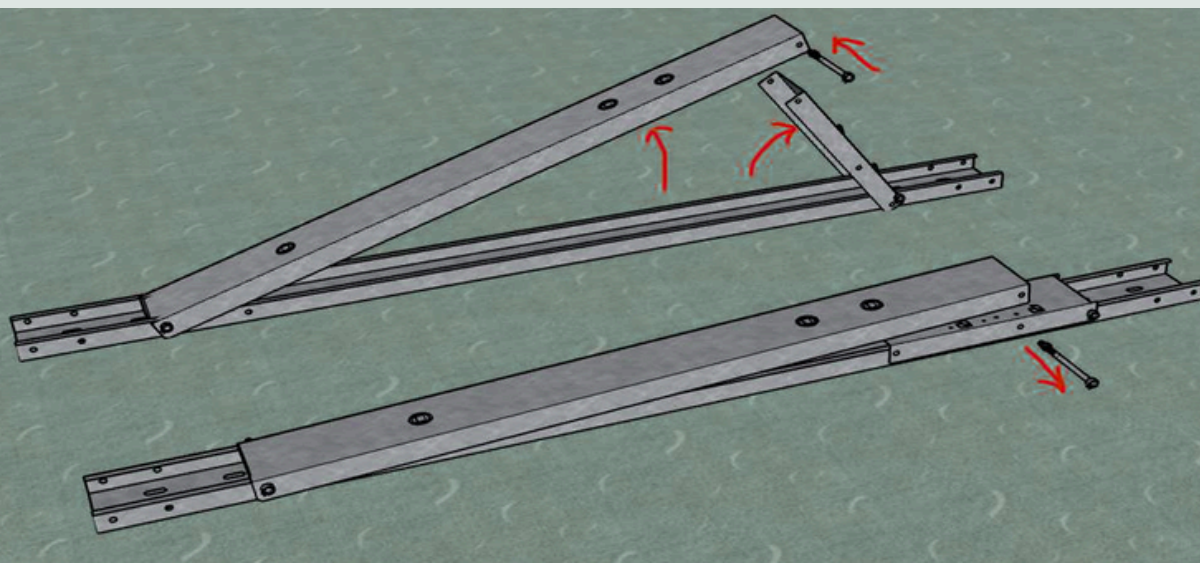
## Gluing

The location of the **FP01** base plate is marked on the surface of the roof membrane. The **FS02** lock bolt is placed in the hole of the base plate, preferably in the middle. The marked area is heated to boiling point and the base plate is carefully placed in place. Next, the felt mat **FM01** is taken and a hole is made in it for the lock bolt. The felt mat is carefully welded all the way onto the felt mat. The hole for the lock bolt is carefully sealed with a bitumen-based sealant. Finally, it is ensured that the gluing has been successful and that the felt mat is completely glued to the roof surface.



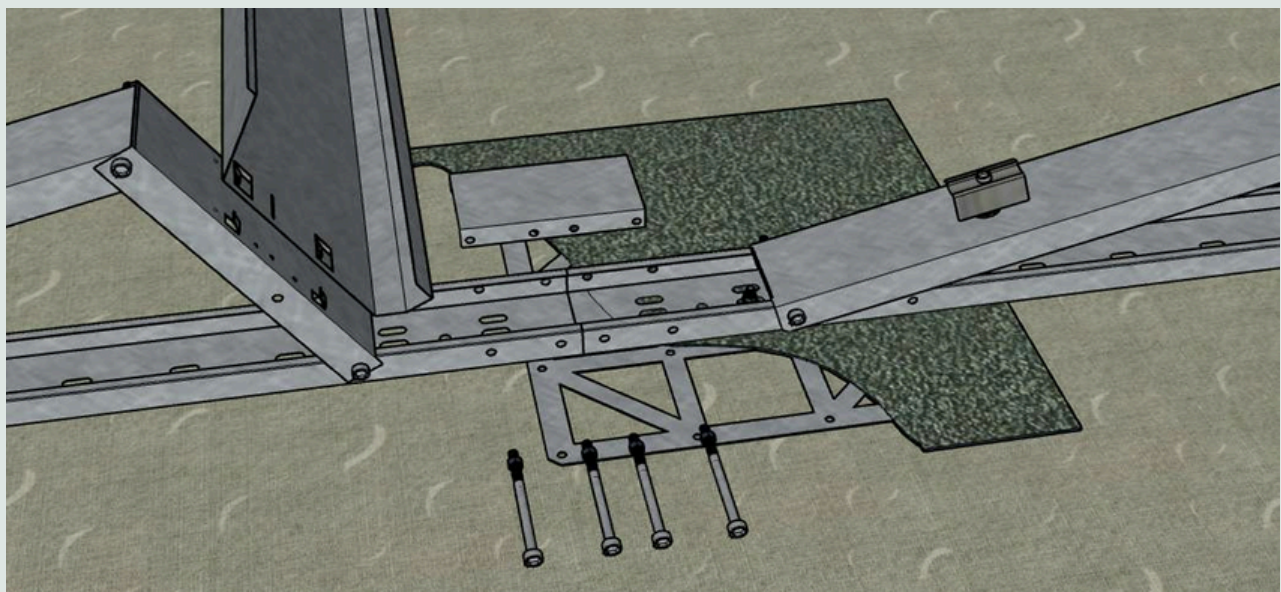
## Assembly of the Ceiling Bracket Set

Nordic FLAT S15L ceiling brackets come in two different sizes: single **TS01** and double **TS02**. The brackets come pre-assembled so that two legs are raised upright, forming a triangle and secured with the included bolt and nut set **FS01**.



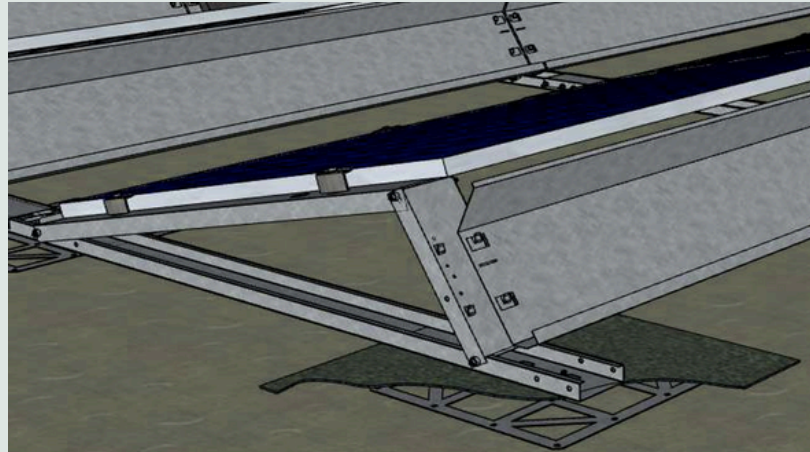
## Connecting the Brackets

Nordic FLAT S15L brackets are connected to each other using the **FC01** extension connector. For attachment, 4 pcs of the FS01 bolt-nut set are required separately.



## Windshield

The windshield is a versatile solution. Its application is considered based on wind load calculations, need for ballast weights, roof structure and its load bearing capacity. Based on calculations and requirements, Moisolar will give tailored recommendations for each project.

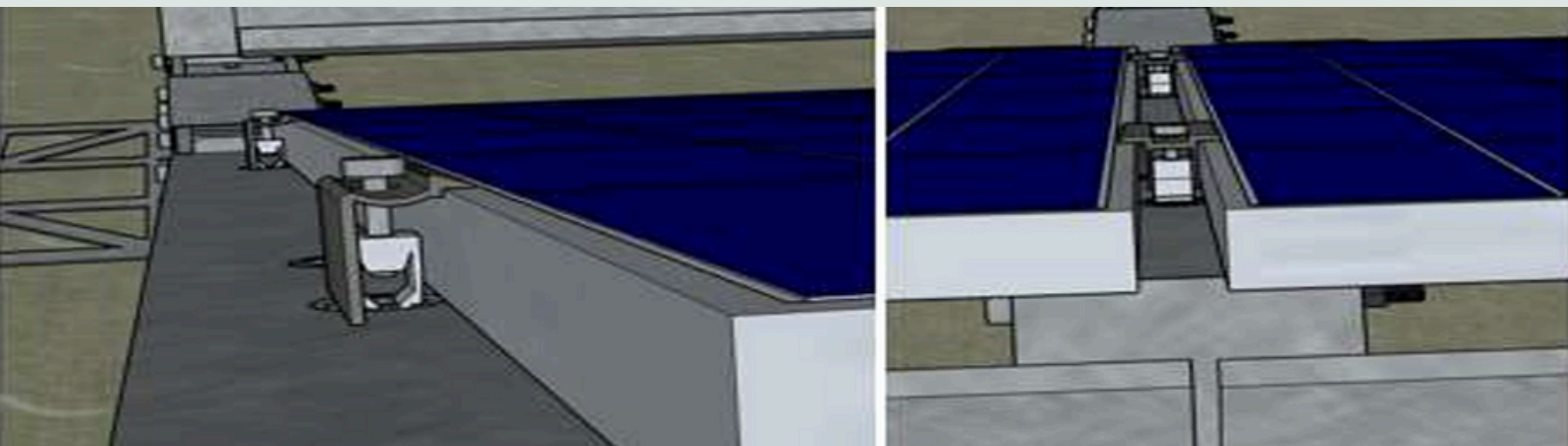


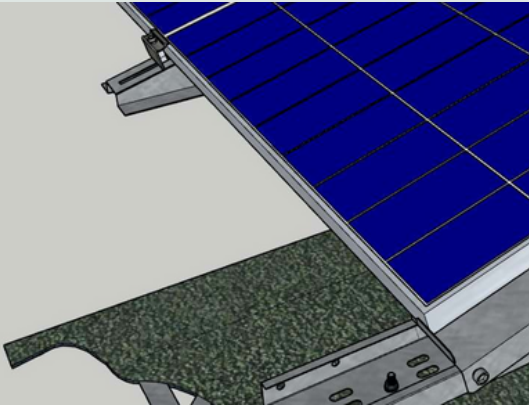
Sole windshield can be applied in cases where mere deflection of the wind forces is enough. If there is a need for more downforce, we can recommend using the windshield with ballast holder and we can help calculate the optimal ballast amount. Please refer to Moisolar sales for accurate tailored solution for your specific project.

Installation is quick thanks to the mounting hooks. The mounting is secured with two sheet metal roofing screws (SS03/SS04). The windshield FW01 is sized for a solar panel measuring **1734 mm ± 20 mm**. A correctly installed windshield reduces the need for ballast, protects the panel from excess pressure and unwanted mechanical stress by stiffening the installation frame.

## Solar Panel Mounting

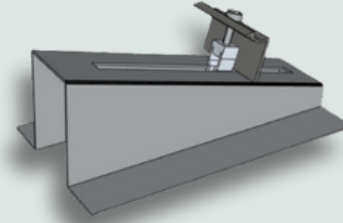
Solar panels are mounted using panel clamps. The **CL02** end clamp is used for the edges and the **CL11** middle clamp is used between the panels. Nordic FLAT S15L triangles are equipped with special holes for the panel clamps.





## Wedge

The Wedge **FK01** can be installed underneath the panel to provide additional support against snow load. The wedge is placed approximately in the middle of the bottom edge of the panel and secured using the end clamp **CL02**.



## Tilting part

Tilting parts **FT11** and **FT02** are innovative additions to the FLAT series. They allow the panels to be raised higher from the roof surface. At the same time, they allow for adjustment of the installation angles. The adjustment supports are designed so that they can be installed both from the outside and from the inside of the roof bracket set. When installed at the corners of the roof bracket, the adjustment supports provide additional reinforcement for the roof bracket structure. Self-drilling screw **SS03** or **SS04** is required for attachment.

## Cables and fastening

The PV01 cable-set is a good solution for all solar panel installations. It contains 3 x 6 mm<sup>2</sup> cables packed in UV protected flexible Ø25 mm tube on a 100 m reel. The **CC01** cable holder and **CC02** cable tie are available for fastening the cable-set.

