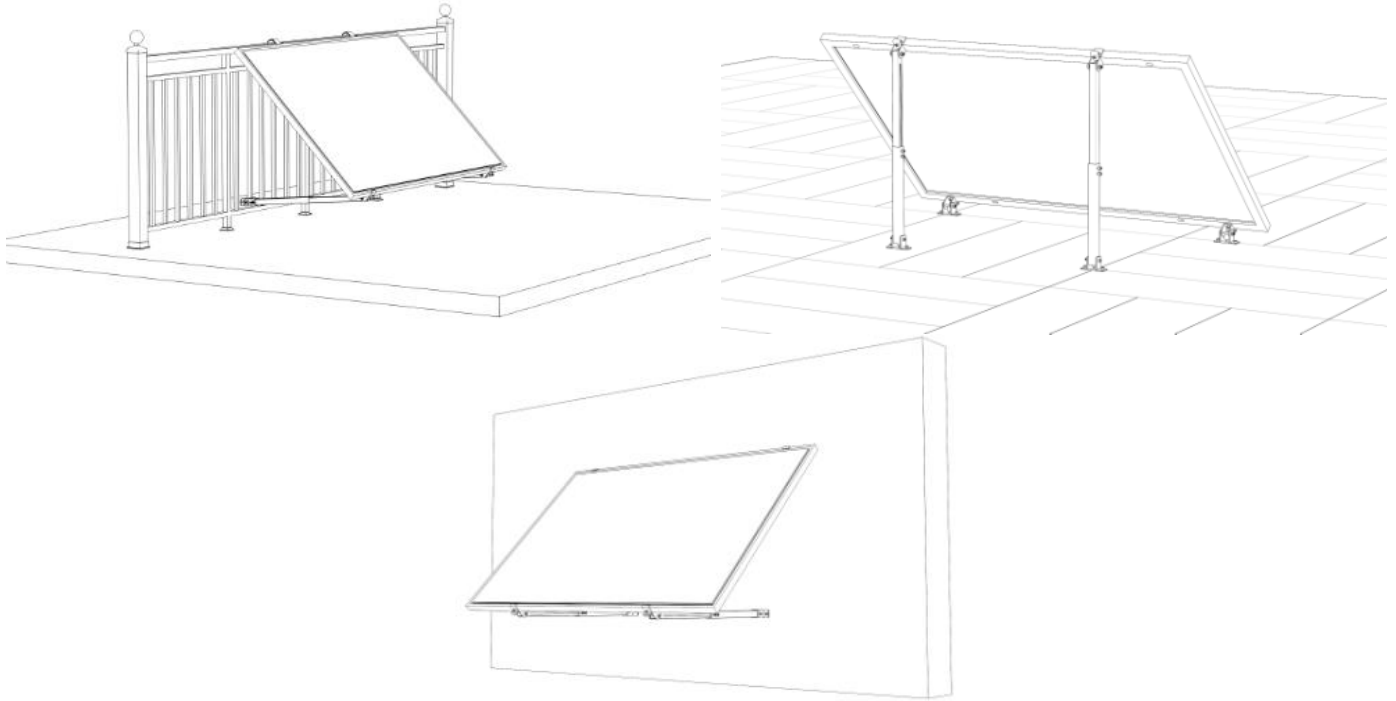


# Technaxx® \* User Manual

## Solar panel bracket set TX-245

## Solar panel bracket 2 sets TX-246

Before using the appliance for the first time, please read the instructions for use and safety information carefully.



This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capacities, or by persons lacking in experience or knowledge, unless they are supervised or instructed on the use of this device by a person responsible for their safety. Children should be supervised to ensure they do not play with this device.

Keep this user manual for future reference or product sharing carefully. Do the same with the original accessories for this product. In case of warranty, please contact the dealer or the store where you bought this product.

***Enjoy your product. \* Share your experience and opinion on one of the well-known internet portals.***

Specifications are subject to change without notice - please be sure to use the latest manual available on the manufacturer's website.

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## Important notes at the start

### Safety instructions

- This product is not a toy. Keep it out of the reach of children.
- These operating instructions are intended to familiarize you with the operation of this product. Therefore, keep these instructions in a safe place so that you can access them at any time. Pass them on to subsequent users.
- Observe the safety instructions during use.
- Conversion or modification of the product will impair product safety. Attention Risk of injury! Attention loss of warranty!
- The product is for wind load zone 2 and snow load zone 2. Wind or/and snow loads exceeding the values of these zones may cause damage to the product or/and the mounting location.
- Check in advance whether the static conditions of your balcony railing/roof/wall/floor are sufficient to support additional loads. Check your state building code (LBO) for requirements for the erection of plants and systems.
- Make sure all screws and fasteners are properly fastened before mounting/hanging the solar module. If screws are loose, there is a risk that the solar module may fall down and create a dangerous situation under the balcony. Use a torque wrench or socket wrench to make sure it is tight.
- Do not exceed these values for the screws: M8 screws:  $11 \pm 1$  N\*m
- Use at least 2 people to lift and install the solar modules.
- Make sure that the bracket is fixed on the top as well as on the bottom of the balcony, so that it can withstand stormy weather.
- Make sure that the mounting surface is strong enough to support the weight and load of the mount including solar module.
- Handle the product with care. It can be damaged by shocks, impacts or falling from even a low height.
- Mounting the bracket on a vehicle roof is prohibited for safety and structural reasons.

- Technical changes and errors excepted.

### **Optical conspicuities / scratches in the materials**

- Visual conspicuities or scratches on the fixture due to industrial production or/and transport are not defects and will not be recognized as such.
- Possible conspicuities in the surface finish do not affect the safety or functionality of the overall system.

### **Disclaimer**

- In no event shall Technaxx Deutschland be liable/responsible for any direct, indirect punitive, incidental, special consequential damage, to property or life, improper storage, whatsoever arising out of or connected with the use or misuse of their products.
- Technaxx Germany assumes no liability for material damage caused by improper installation or non-observance of the installation instructions.

### **Features**

- Continuously adjustable inclination up to 45° (depending on panel)
- 3 mounting options (balcony, floor, wall)
- Suitable for wall, floor and railing mounting
- Suitable for most solar panels with frame (35mm thickness)
- White protective coating for best weather resistance
- With stainless steel railing hooks
- Easy assembly

## Scope of delivery

### TX-245

- 2x Front leg
- 2x Back leg
- 2x Railing hooks
- 22x Hex nut M8
- 4x Square counter plate M8
- 10x Cylinder head hexagon socket screw M8x20
- 4x Cylinder head hexagon socket screw M8x25
- 4x Cylinder head hexagon socket screw M8x50
- 2x Cylinder head hexagon socket screw M8x60
- 6x Cylinder head hexagon socket screw M8x90
- 2x Steel washer (4mm 105x40mm)

Additionally needed:

- Solar module

Optional accessory for:

- TX-212
- TX-213
- One solar panel

### TX-246

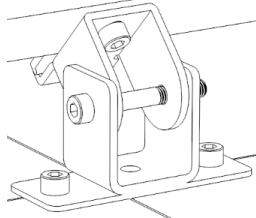
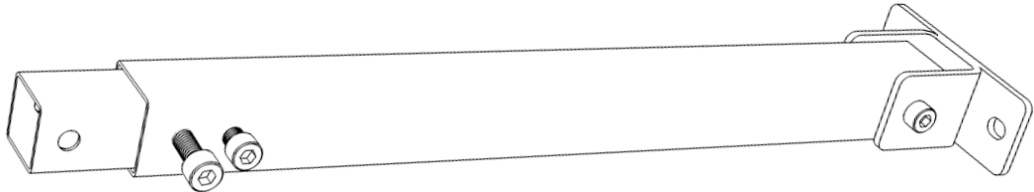
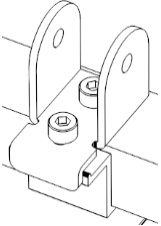
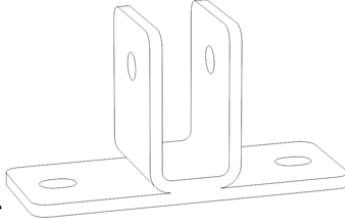
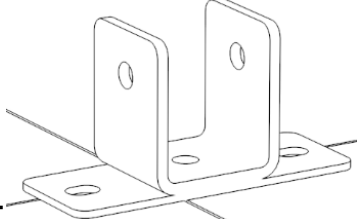
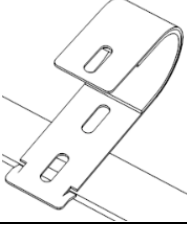

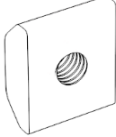
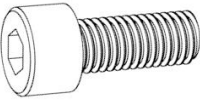


- 4x Front leg
- 4x Back leg
- 4x Railing hooks
- 44x Hex nut M8
- 8x Square counter plate M8
- 20x Cylinder head hexagon socket screw M8x20
- 8x Cylinder head hexagon socket screw M8x25
- 8x Cylinder head hexagon socket screw M8x50
- 4x Cylinder head hexagon socket screw M8x60
- 12x Cylinder head hexagon socket screw M8x90
- 4x Steel washer (4mm 105x40mm)



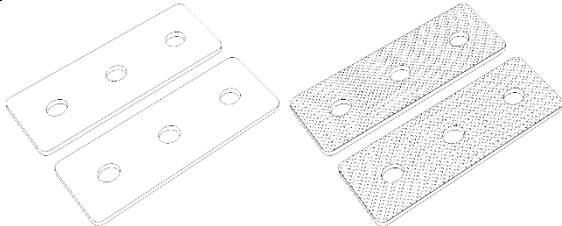
Additionally needed:

- Solar module

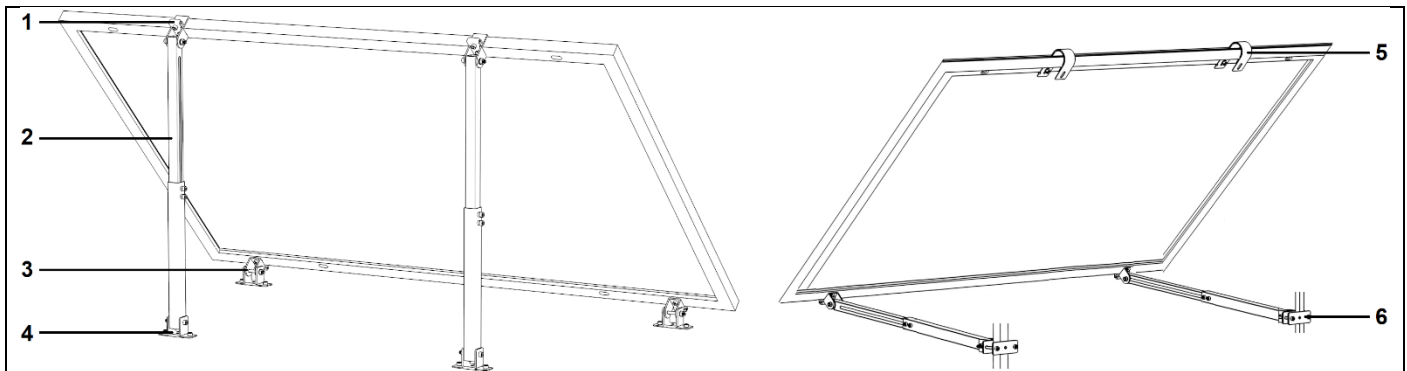
Optional accessory for:

- TX-220
- TX-228
- TX-241
- Two solar panels

|                               |    |   |
|-------------------------------|----|---|
| Front leg                     | A  |   |
| Back leg                      | B  |   |
| Holder for front and back leg | C1 |    |
| Mount for front and back leg  | C2 | <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Front:</p> </div> <div style="text-align: center;">  <p>Back:</p> </div> </div> |
| Railing hook with rubber      | D  |    |
| Hex nut M8                    | E  |    |
| Square counter plate M8       | F  |    |
| Cylinder head screw M8x20     | G  |    |
| Cylinder head screw M8x25     | H  |    |
| Cylinder head screw M8x50     | I  |    |

|                           |   |   |
|---------------------------|---|---|
| Cylinder head screw M8x60 | J |  |
| Cylinder head screw M8x90 | K |  |
| Steel wascher with rubber | L |  |

## Product overview



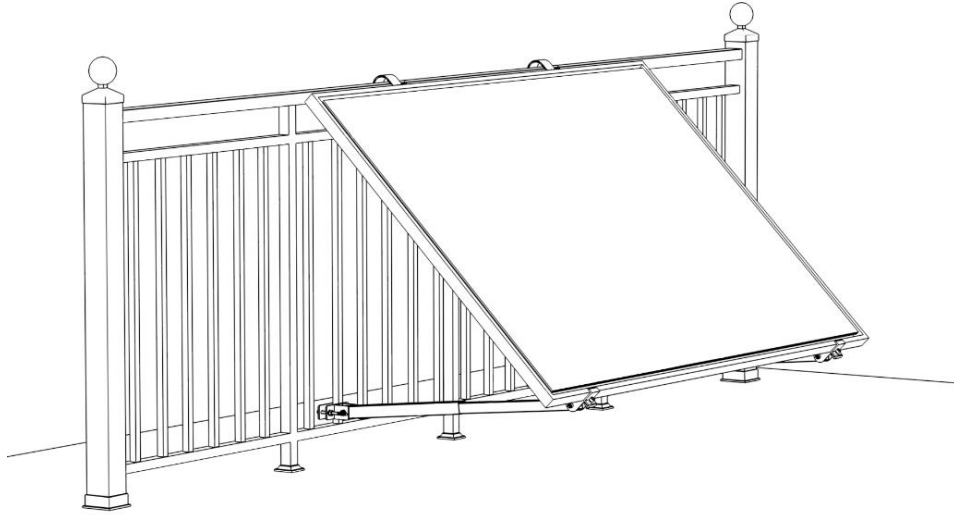
\* Solar module not included

|   |                               |   |                              |
|---|-------------------------------|---|------------------------------|
| 1 | Holder for front and back leg | 4 | Mount for front and back leg |
| 2 | Back leg                      | 5 | Hook                         |
| 3 | Front leg                     | 6 | Stainless steel washer       |

## Balcony railing installation

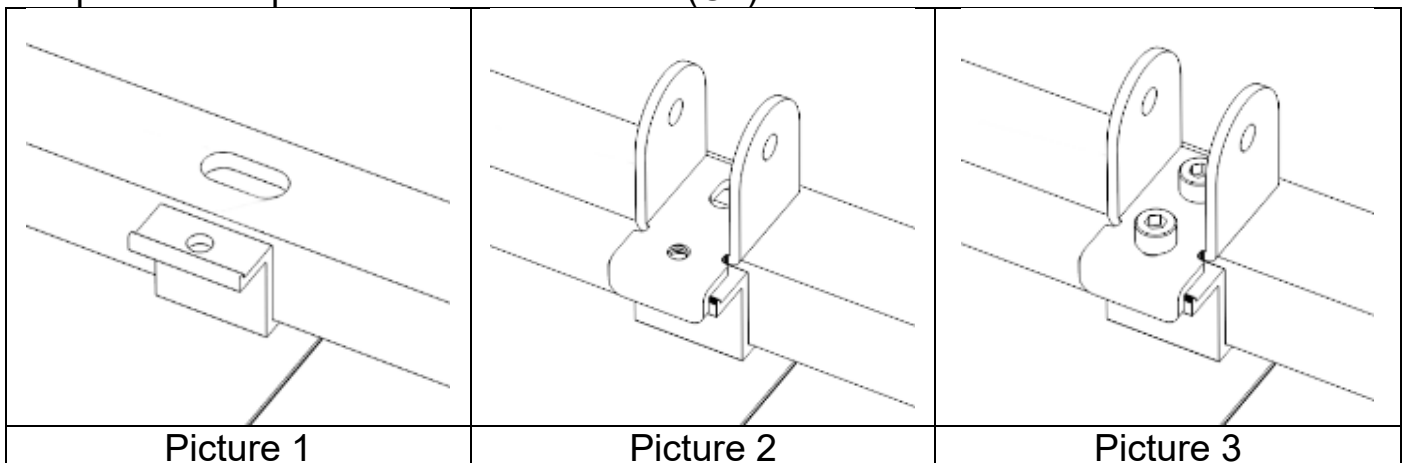
- These installation instructions are only intended to describe the installation.
- Be at least 2 people to lift and mount the solar modules.
- Do not stand on the module or the module frame.
- To prevent grease stains on the module, avoid contact with your hands on the glass surface and ideally wear work gloves.
- Lay the solar module flat on clean surface. Best is to use some protection like a blanket or cardboard in the size of the module underneath. Be careful not to damage the glass front.

**Note:** For the assembly is a 13mm wrench and a 6mm hex wrench needed.



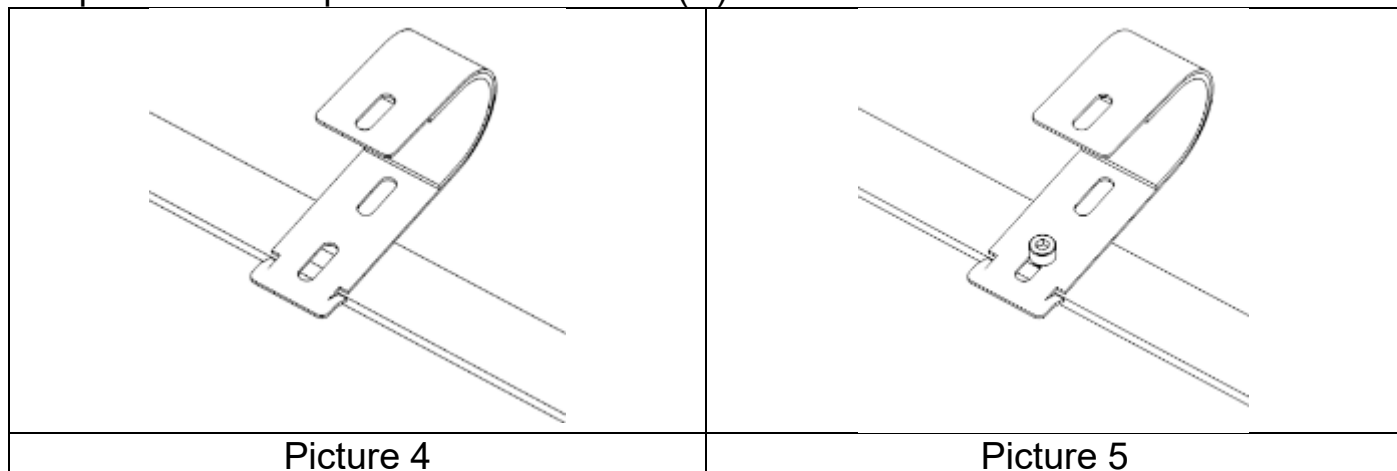
### Step 1: Mount the holder (C1) for the back leg (B) to the solar panel

- Take the aluminum clamp and put it next to the hole of the panel (picture 1).
- Put the hinge clamp on the panel hole like shown in picture 2.
- Mount the aluminum clamp with the M8x25 (H) and a hex nut (E) to the hinge clamp. Use the M8x20 (G) and a hex nut (E) to secure the clamp hinge to the panel. This secures the holder (C1) to the panel (picture 3).
- Repeat the steps on the second Holder (C1).



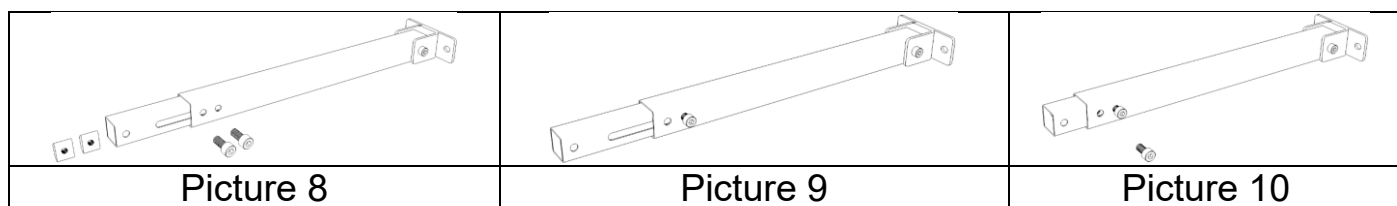
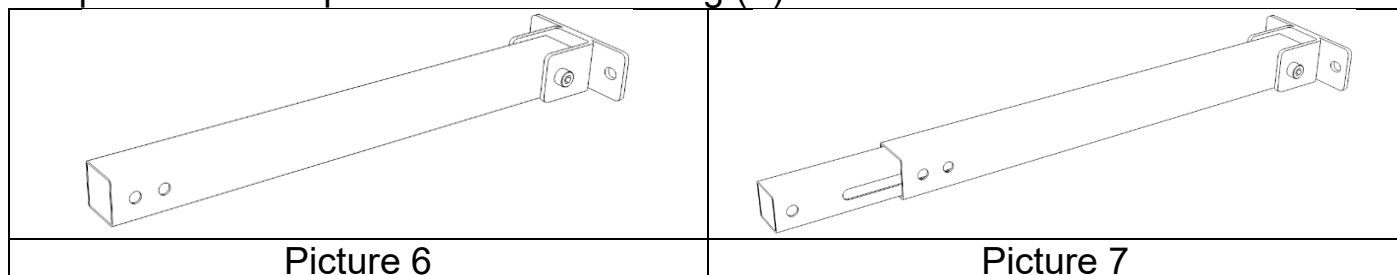
**Step 2: Mount the Hooks (D) to the solar panel**

- Clip the hook to the frame of the solar panel and snap it in to secure it (picture 4).
- Use the M8x20 (G) to fix the hook (D) to the panel (picture 5). Secure the screw with a hex nut (E).
- Repeat above steps for the other hook (D).



**Step 3: Assemble the back leg (B) (already done)**

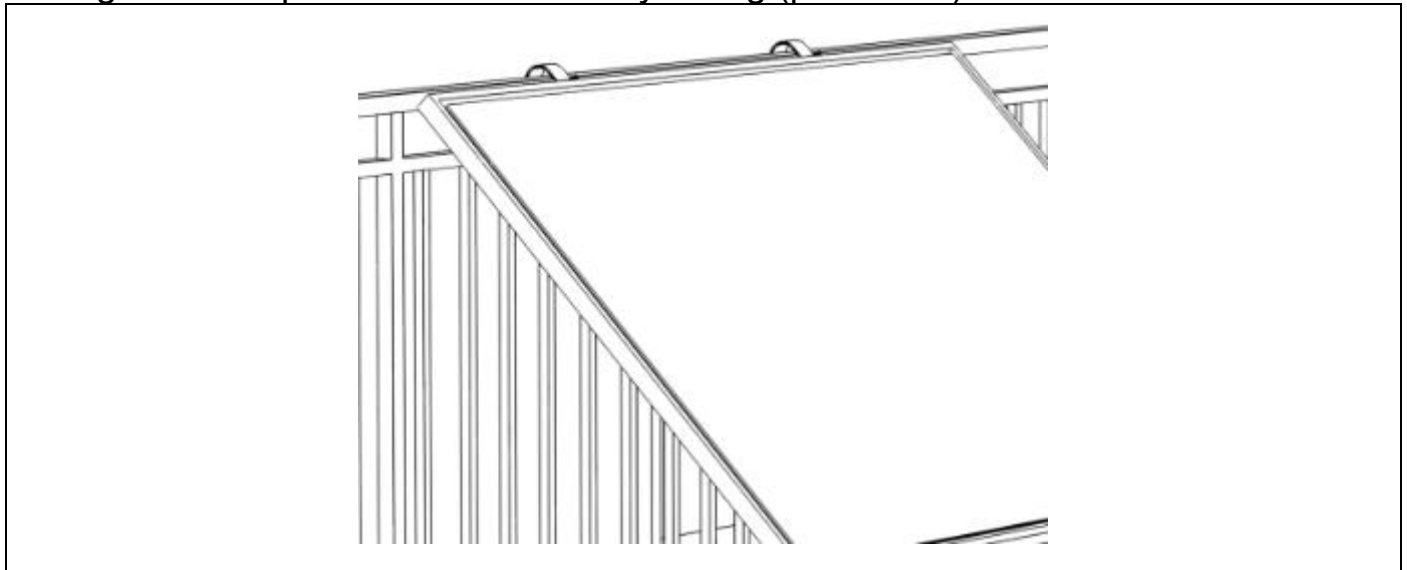
- Mount the holder (C2) with M8x60 (J) and a hex nut (E) to the back leg (B) (picture 6).
- Insert the telescope part of the back leg into the bottom part (picture 7).
- Take the square counter plate (F) and a M8x20 (G) to secure the telescope part of the back leg (picture 8-10).
- Repeat above steps for the other back leg (B).





**Step 4:** Hang the solar panel onto the balcony railing

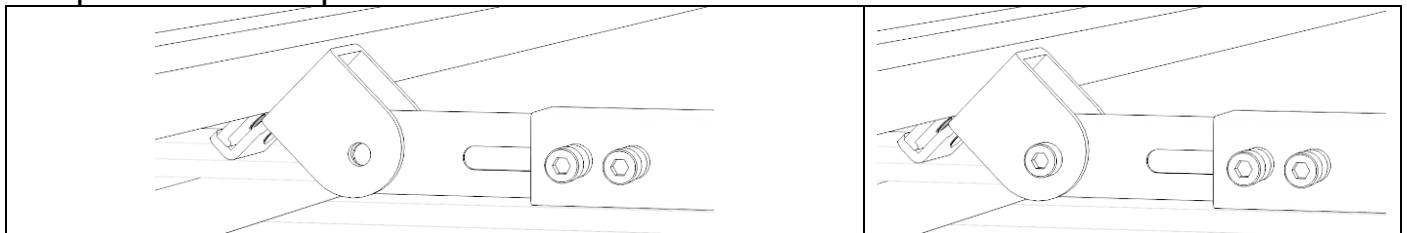
- The rubber washer on the inside of the hook (D) protects the railing from scratches.
- Hang the solar panel onto the balcony railing (picture 11).



Picture 11

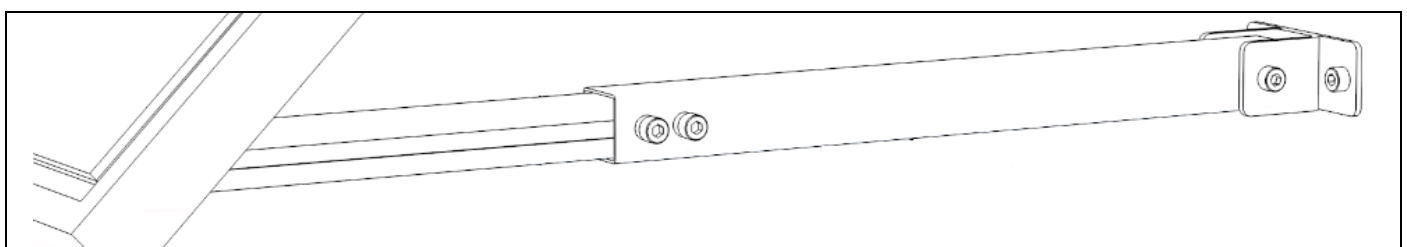
**Step 5:** Connect the back leg (B) with the holder (C1)

- Align the holes of the holder (C1) and the back leg (B) (picture 12).
- Use the M8x50 (I) and a hex nut (E) to tighten the connection (picture 13).
- Enlarge the back leg to the fitting size with your balcony (picture 14).
- Repeat above steps for the other connection.



Picture 12

Picture 13



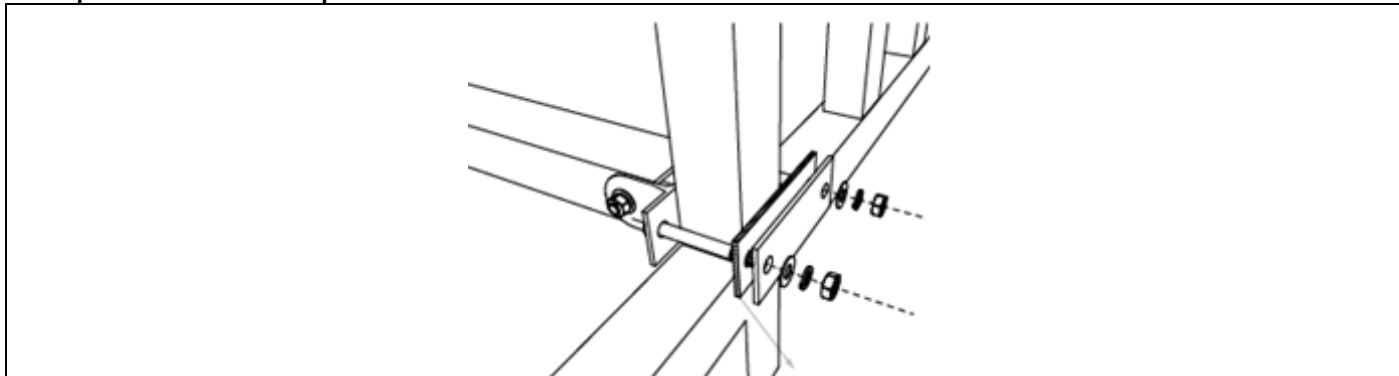
Picture 14

**Step 6:** Connect the back leg (B) with the bottom of the balcony railing.

- Take the 2x M8x90 (K), 1x steel washer (L) and 2x hex nuts (E) (picture 15).
- Insert the M8x90 (K) to the holder of the back leg.
- Put the steel washer (L) on to the screws to counter.

**Note:** The rubber washer is already glued on to the steel washer (L).

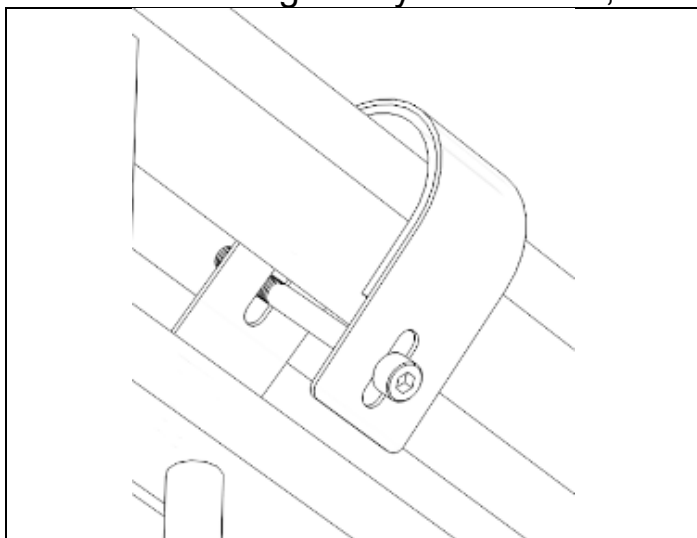
- Use the hex nut (E) to tighten the connection.
- Repeat above steps for the other connection.



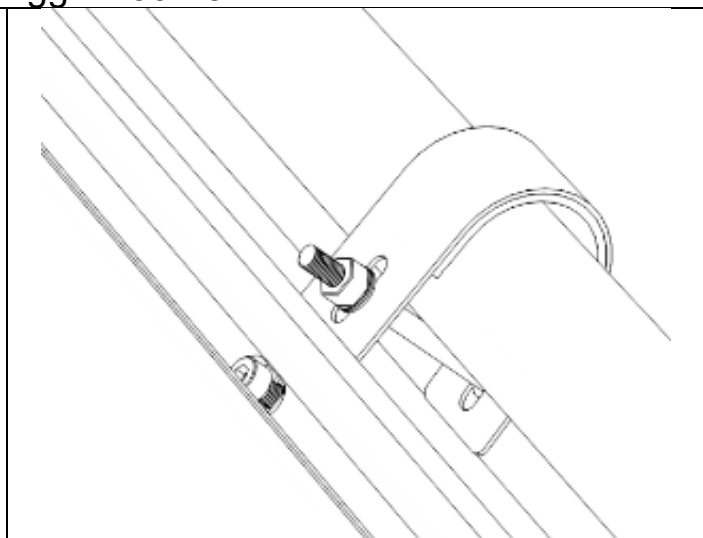
Picture 15

**Step 7:** Fix the hook to the railing

- Use the M8x90 (K) and a hex nut (E) to fix the hook to the railing (picture 16-17).
- Repeat above step for the other hook (D).
- Set the best angle for your location, we suggest 30-45°.

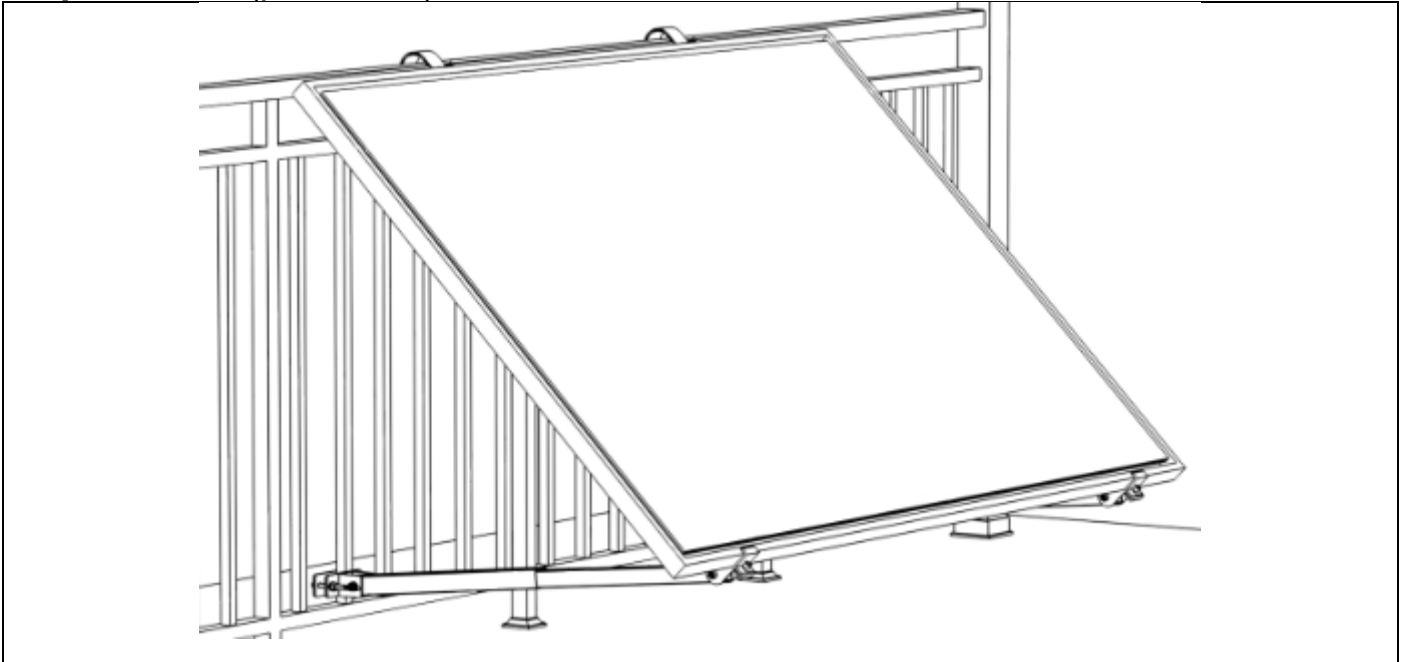


Picture 16



Picture 17

## Step 8: Finish (picture 18)

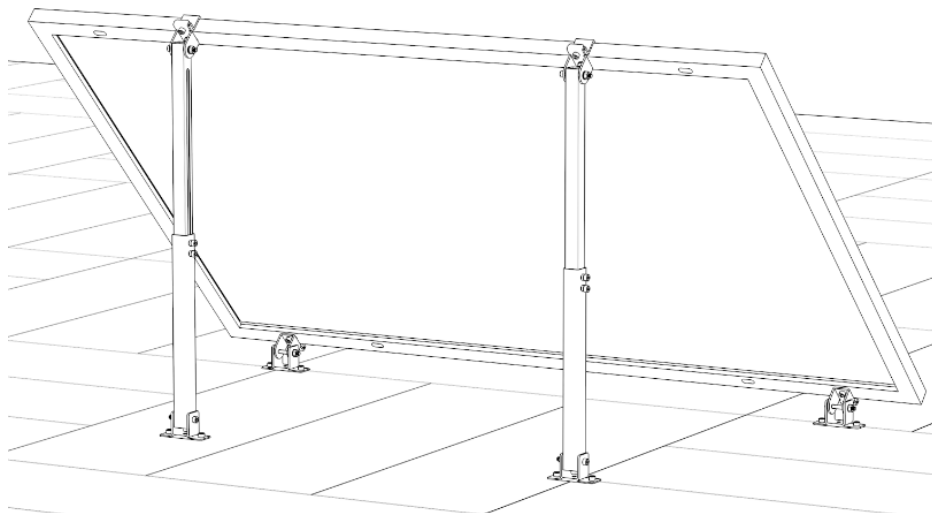


Picture 18

## Installation on the ground

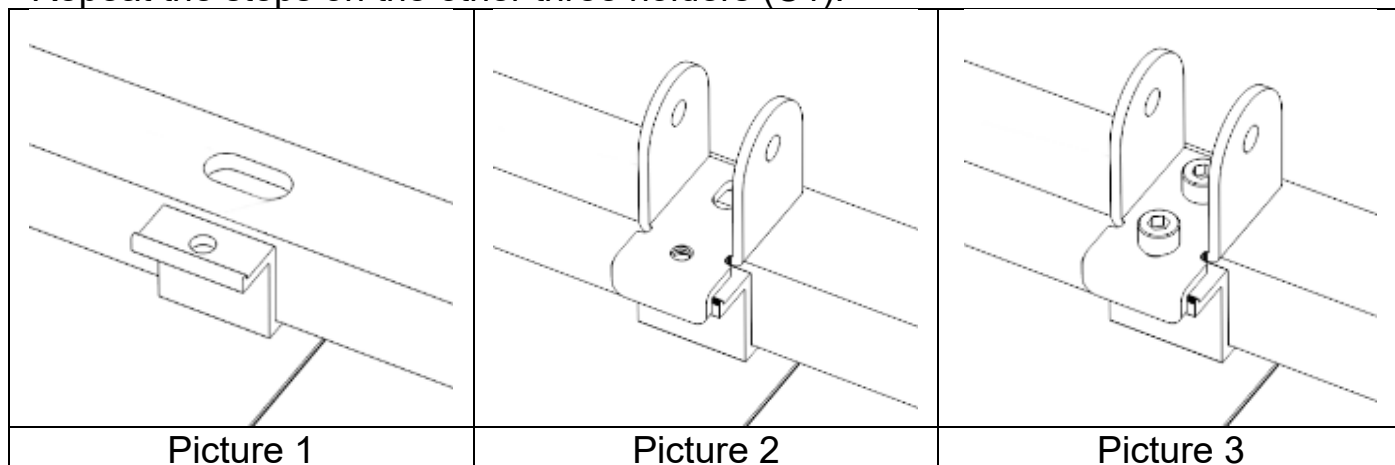
- These installation instructions are only intended to describe the installation.
- Be at least 2 people to lift and mount the solar modules.
- Do not stand on the module or the module frame.
- To prevent grease stains on the module, avoid contact with your hands on the glass surface and ideally wear work gloves.
- Lay the solar module flat on clean surface. Best is to use some protection like a blanket or cardboard in the size of the module underneath. Be careful not to damage the glass front.

**Note:** For the assembly is a 13mm wrench and a 6mm hex wrench needed. Further a drilling machine is needed.



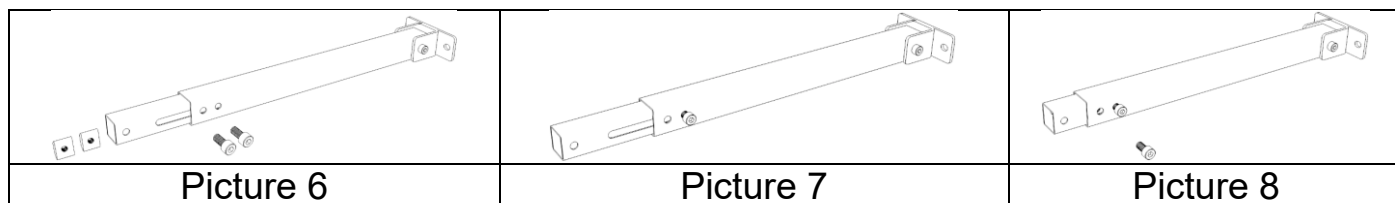
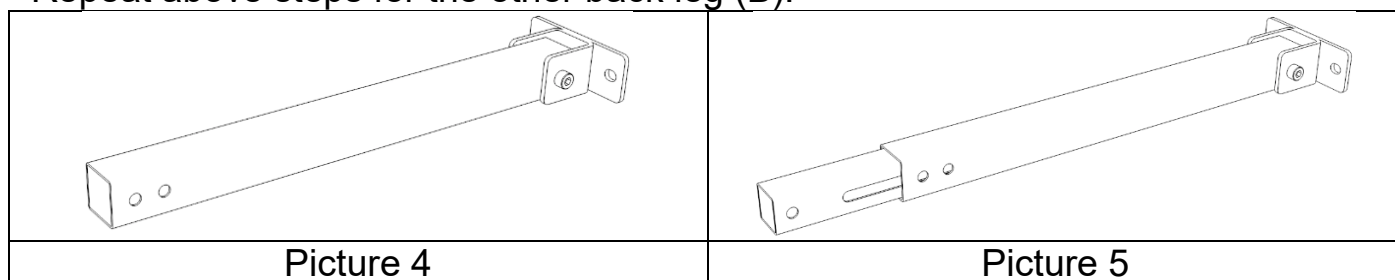
**Step 1:** Mount the holder (C1) for the front leg (A) and the back leg (B) to the solar panel

- Take the aluminum clamp and put it next to the hole of the panel (picture 1).
- Put the hinge clamp on the panel hole like shown in picture 2.
- Mount the aluminum clamp with the M8x25 (H) and a hex nut (E) to the hinge clamp. Use the M8x20 (G) and a hex nut (E) to secure the clamp hinge to the panel. This secures the holder (C1) to the panel (picture 3).
- Repeat the steps on the other three holders (C1).



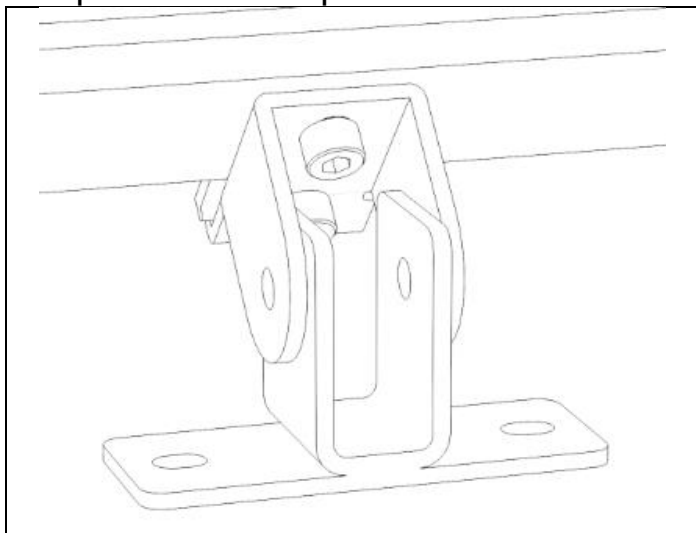
**Step 2:** Assemble the back leg (B) (already done)

- Attach the mount (C2) with M8x60 (J) and a hex nut (E) to the back leg (B) (picture 4).
- Insert the telescope part of the back leg into the bottom part (picture 5).
- Take the square counter plate (F) and a M8x20 (G) to secure the telescope part of the back leg (picture 6-8).
- Repeat above steps for the other back leg (B).

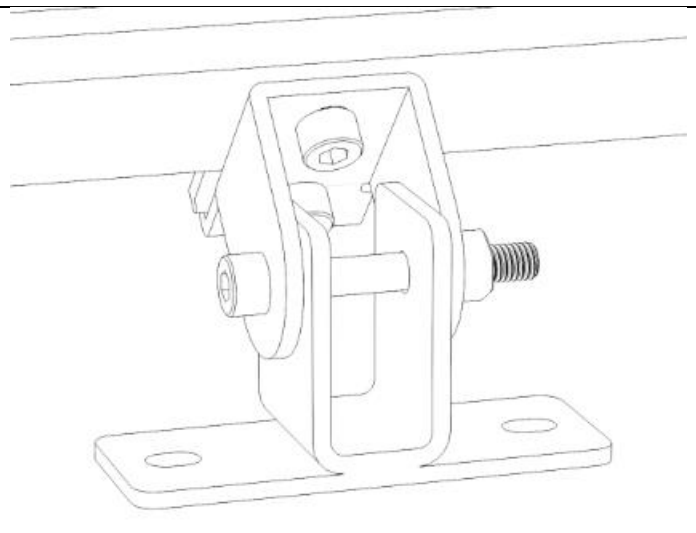


**Step 3: Connect the front leg (A) with the mount (C2)**

- Align the holes of the mount (C2) and the front leg (A) (picture 9).
- Use the M8x50 (I) and a hex nut (E) to tighten the connection (picture 10).
- Repeat above steps for the other connection.



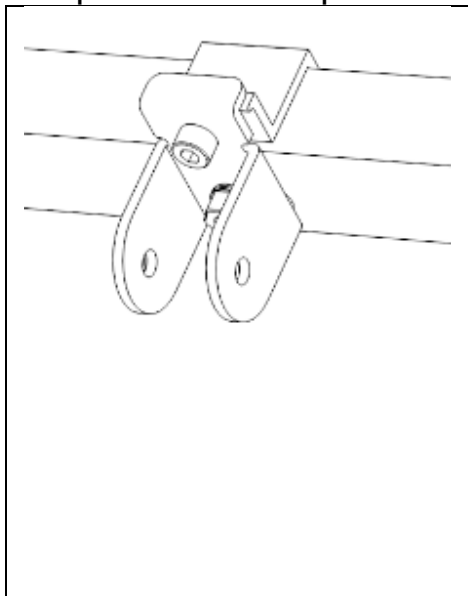
Picture 9



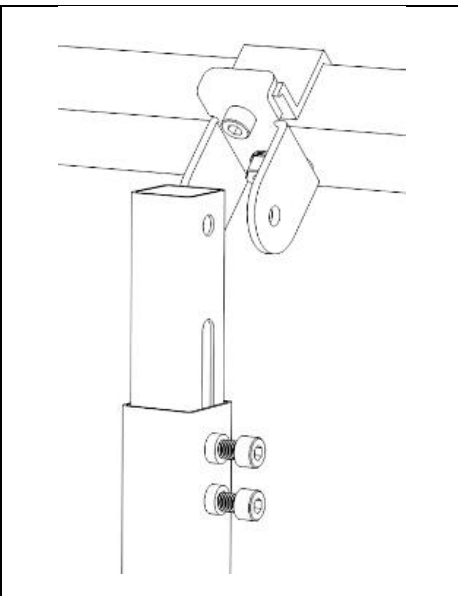
Picture 10

**Step 4: Connect the back leg (B) with the holder (C1)**

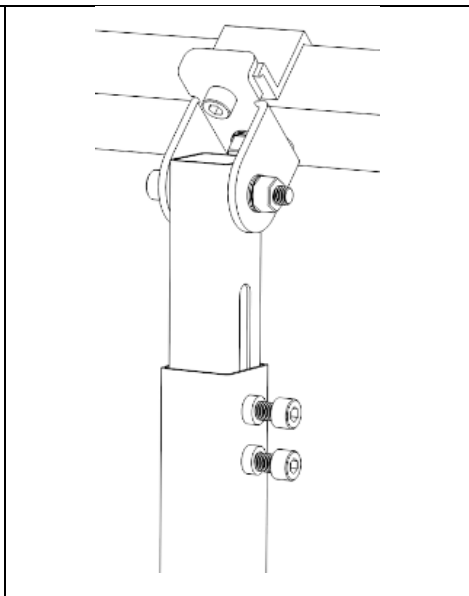
- Lift up the panel to easier connect the back leg (B) (picture 11).
- Align the holes of the holder (C1) and the back leg (B) (picture 12).
- Use the M8x50 (I) and a hex nut (E) to tighten the connection (picture 13).
- Repeat above steps for the other connection.



Picture 11



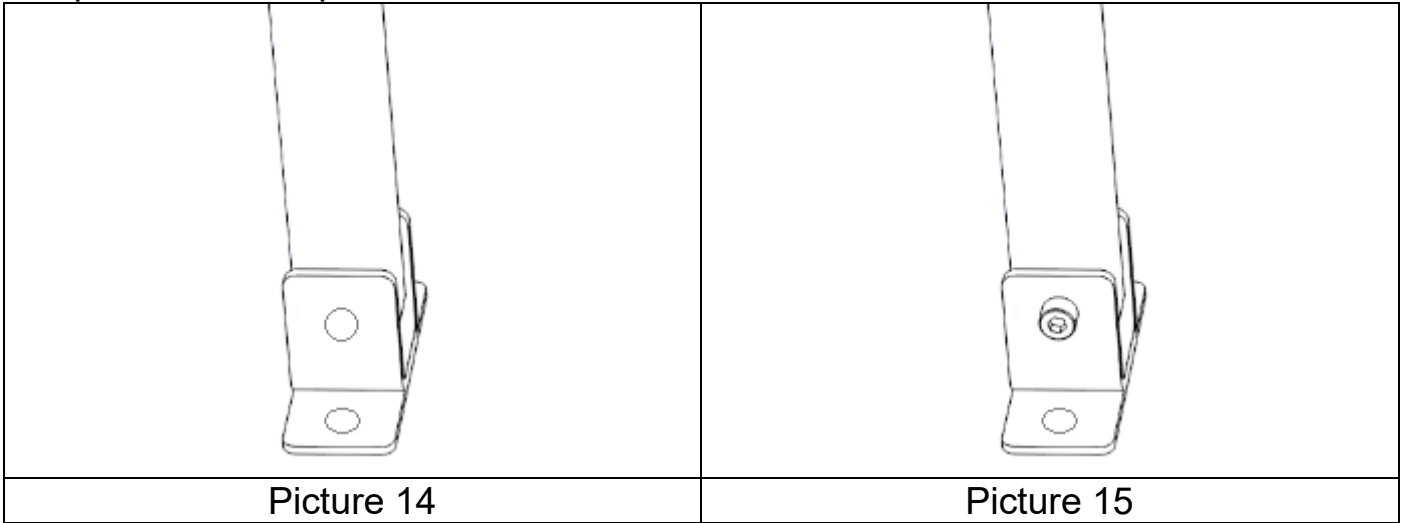
Picture 12



Picture 13

**Step 5:** Connect the back leg (B) with the mount (C2)

- Align the holes of the mount (C2) and the back leg (B) (picture 14).
- Use the M8x60 (J) and a hex nut (E) to tighten the connection (picture 15).
- Repeat above steps for the other connection.



**Step 6:** Attach the mount (C2) to the ground

**Note:** If you drill a hole in the wall or ground, make sure that power cables, electrical cords and/or pipelines are not damaged. When using the supplied mounting material, we do not take the liability for a professional installation. You are entirely responsible to ensure that the mounting material is suitable for the particular masonry, and that the installation is done properly. When working at higher altitudes, there is danger of falling! Therefore, use suitable safeguards.

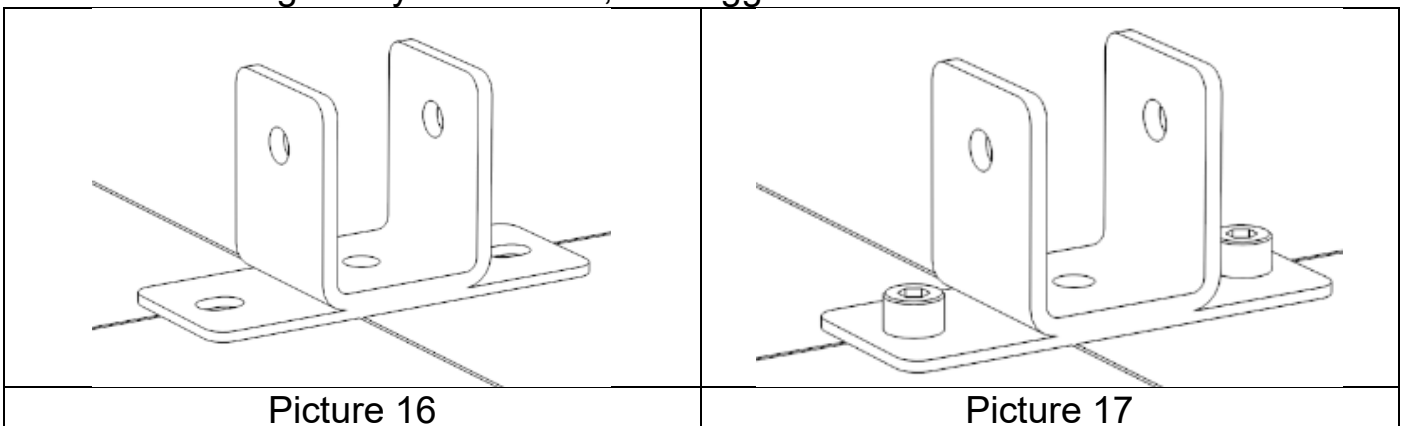
- When the assembly is completed set it up in the location where you want to install it.

**Note:** The max. and min. adjustable angle depend on the size of the solar panel.

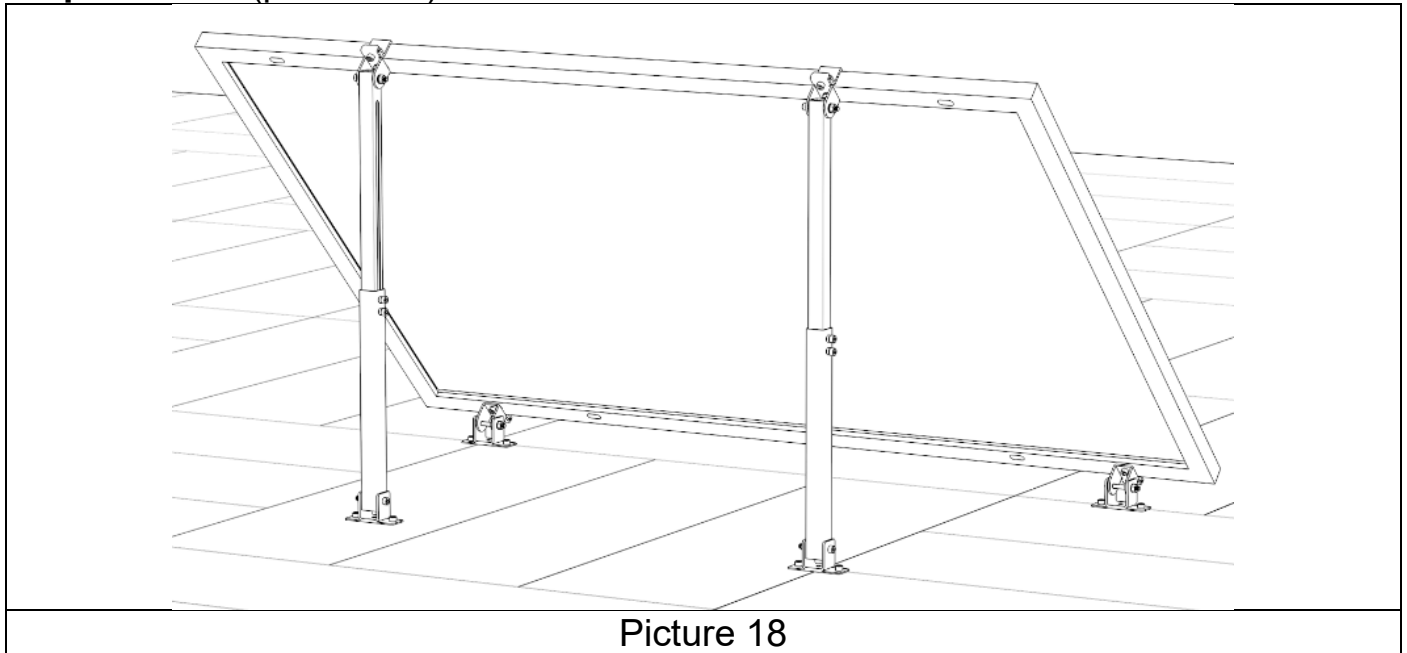
- Now mark the holes of the mounts (C2) on the ground for each leg (picture 16).
- Drill the holes using a drilling machine.

**Note:** Use mounting material (screws and dowels) that suits your mounting location and ground structure. Further the mounting material may have to withstand high forces of wind. Firm and stable fastening is mandatory.

- Tighten the screws to the mount (C2) (picture 17).
- Set the best angle for your location, we suggest 30-45°.



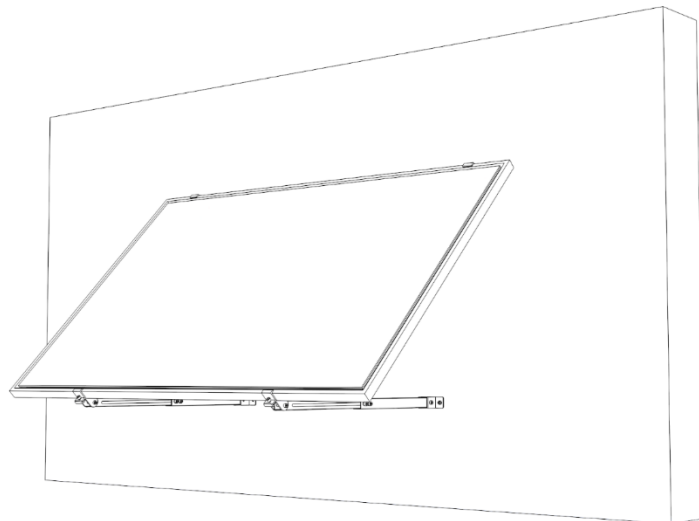
## Step 7: Finish (picture 18)



## Installation on the wall

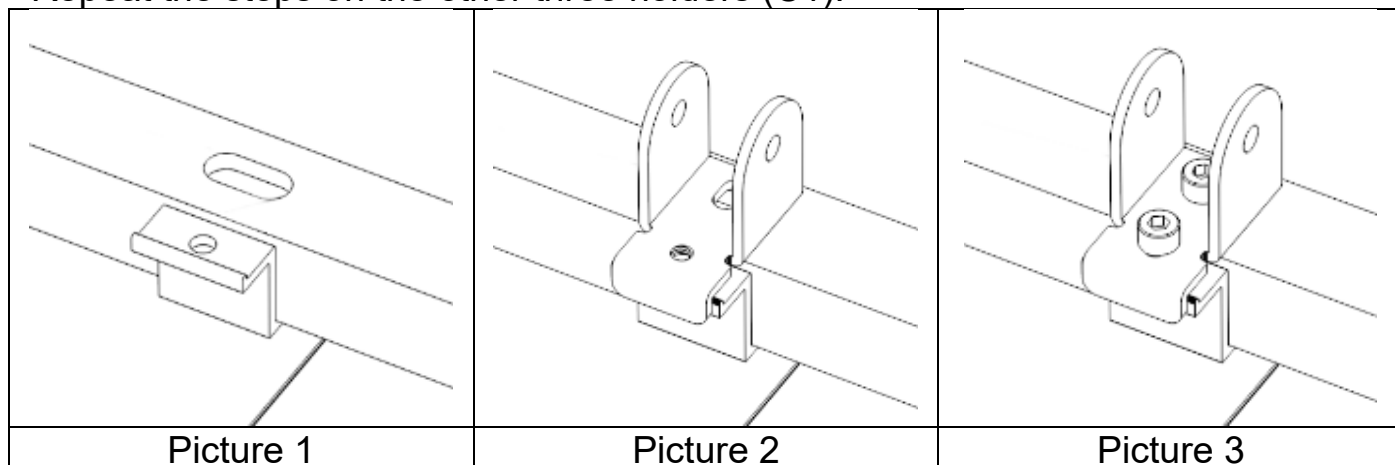
- These installation instructions are only intended to describe the installation.
- Be at least 2 people to lift and mount the solar modules.
- Do not stand on the module or the module frame.
- To prevent grease stains on the module, avoid contact with your hands on the glass surface and ideally wear work gloves.
- Lay the solar module flat on clean surface. Best is to use some protection like a blanket or cardboard in the size of the module underneath. Be careful not to damage the glass front.

**Note:** For the assembly is a 13mm wrench and a 6mm hex wrench needed. Further a drilling machine is needed.



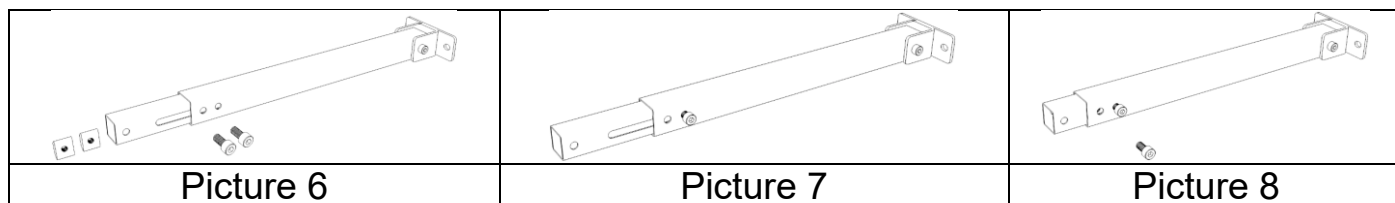
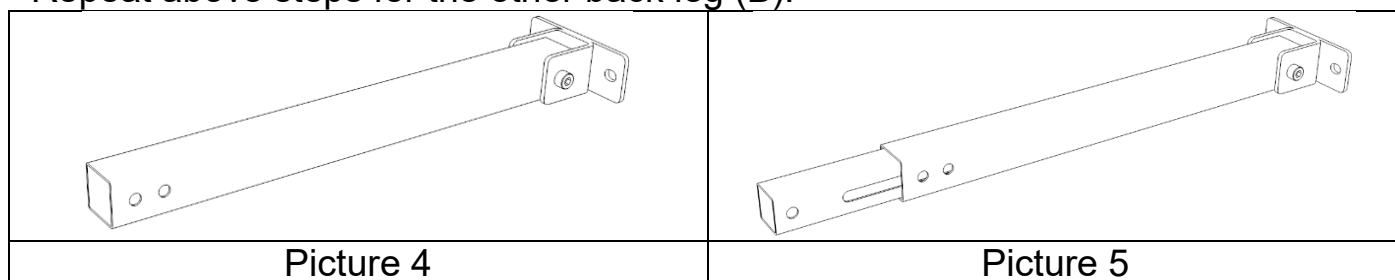
**Step 1:** Mount the holder (C1) for the front leg (A) and the back leg (B) to the solar panel

- Take the aluminum clamp and put it next to the hole of the panel (picture 1).
- Put the hinge clamp on the panel hole like shown in picture 2.
- Mount the aluminum clamp with the M8x25 (H) and a hex nut (E) to the hinge clamp. Use the M8x20 (G) and a hex nut (E) to secure the clamp hinge to the panel. This secures the holder (C1) to the panel (picture 3).
- Repeat the steps on the other three holders (C1).



**Step 2:** Assemble the back leg (B) (already done)

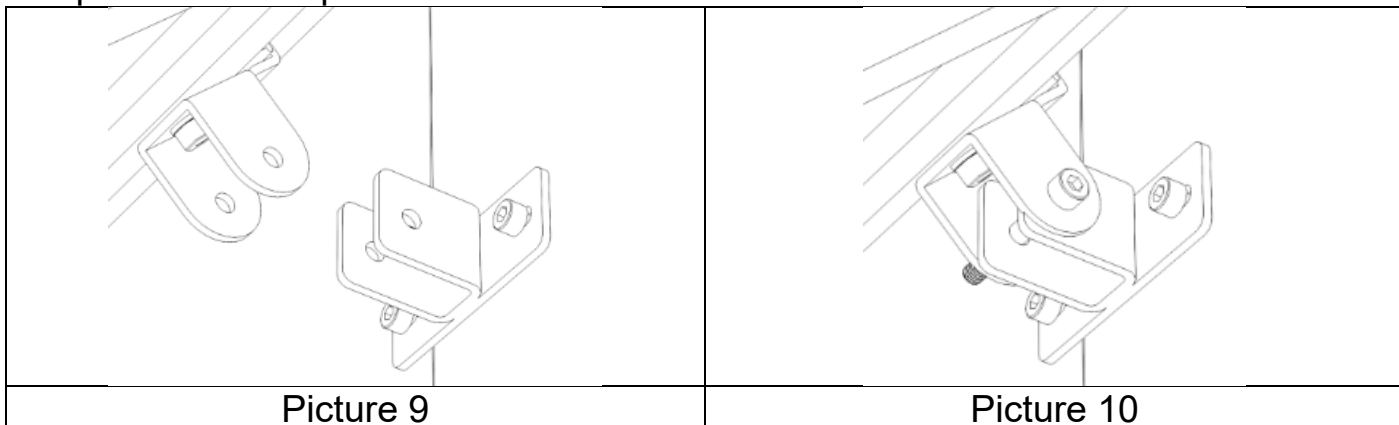
- Attach the mount (C2) with M8x60 (J) and a hex nut (E) to the back leg (B) (picture 4).
- Insert the telescope part of the back leg into the bottom part (picture 5).
- Take the square counter plate (F) and a M8x20 (G) to secure the telescope part of the back leg (picture 6-8).
- Repeat above steps for the other back leg (B).





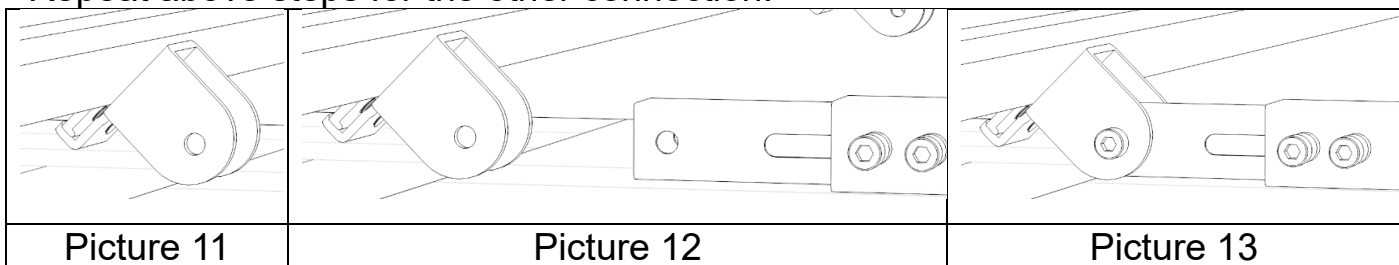
**Step 3: Connect the front leg (A) with the mount (C2)**

- Align the holes of the mount (C2) and the front leg (A) (picture 9).
- Use the M8x50 (I) and a hex nut (E) to tighten the connection (picture 10).
- Repeat above steps for the other connection.



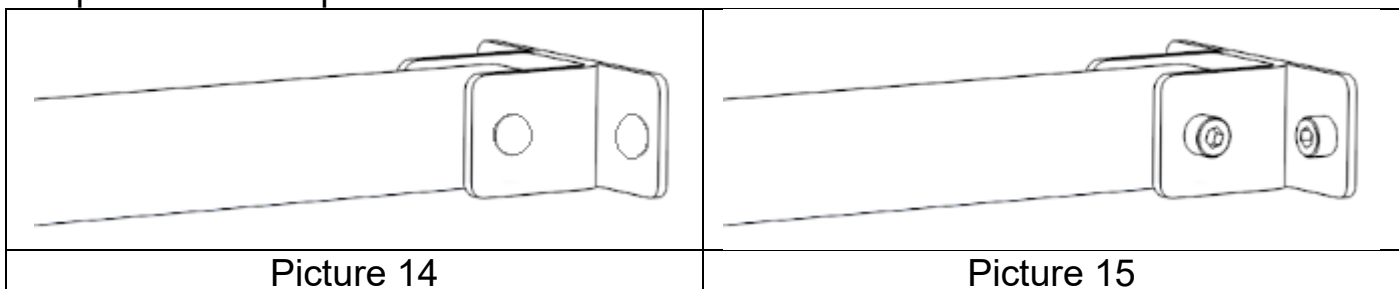
**Step 4: Connect the back leg (B) with the holder (C1)**

- Lift up the panel to easier connect the back leg (B) (picture 11).
- Align the holes of the holder (C1) and the back leg (B) (picture 12).
- Use the M8x50 (I) and a hex nut (E) to tighten the connection (picture 13).
- Repeat above steps for the other connection.



**Step 5: Connect the back leg (B) with the mount (C2)**

- Align the holes of the mount (C2) and the back leg (B) (picture 14).
- Use the M8x60 (J) and a hex nut (E) to tighten the connection (picture 15).
- Repeat above steps for the other connection.



**Step 6: Attach the mount (C2) to the wall**

**Note:** If you drill a hole in the wall or ground, make sure that power cables, electrical cords and/or pipelines are not damaged. When using the supplied mounting material, we do not take the liability for a professional installation. You are entirely responsible to ensure that the mounting material is suitable for the particular masonry, and that the installation is done properly. When working at higher altitudes, there is danger of falling! Therefore, use suitable safeguards.

- When the assembly is completed set it up in the location where you want to install it.

**Note:** The max. and min. adjustable angle depend on the size of the solar panel.

- Now mark the holes of the mounts (C2) on the wall for each leg (picture 16).

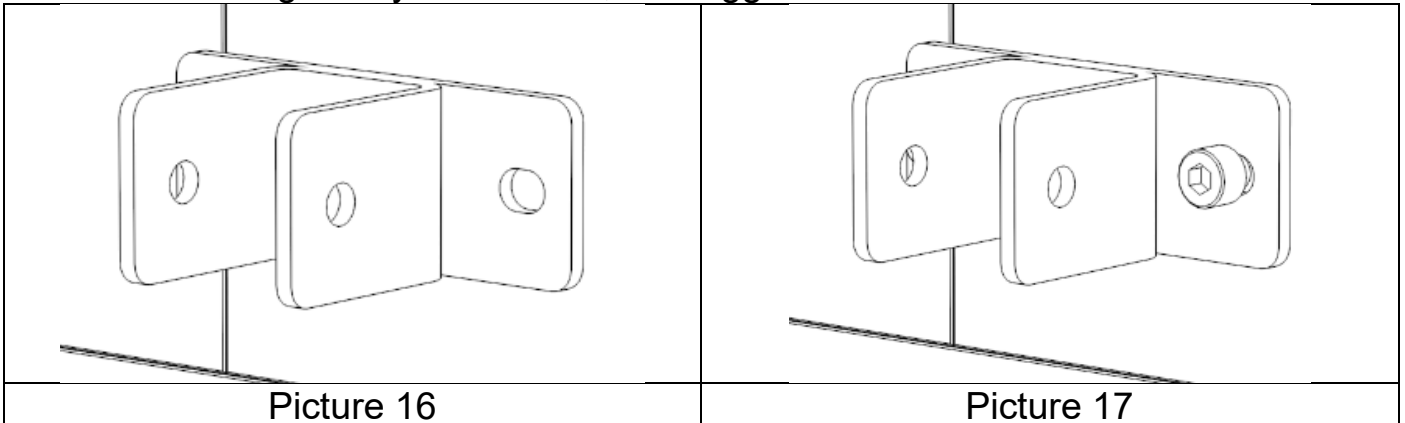
**Note:** Be at least two people to install the solar panel.

- Drill the holes using a drilling machine.

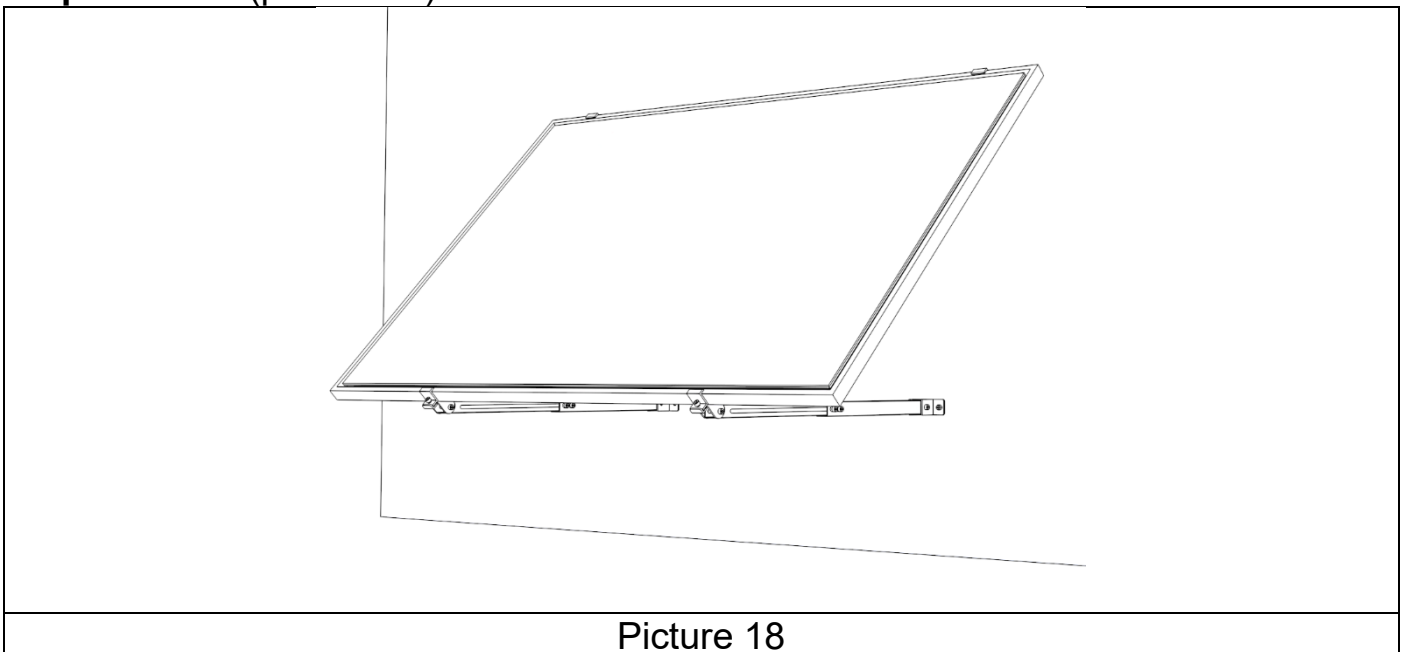
**Note:** Use mounting material (screws and dowels) that suits your mounting location and wall structure. Further the mounting material may have to withstand high forces of wind. Firm and stable fastening is mandatory.

- Tighten the screws to the mount (C2) (picture 17).

- Set the best angle for your location, we suggest 30-45°.

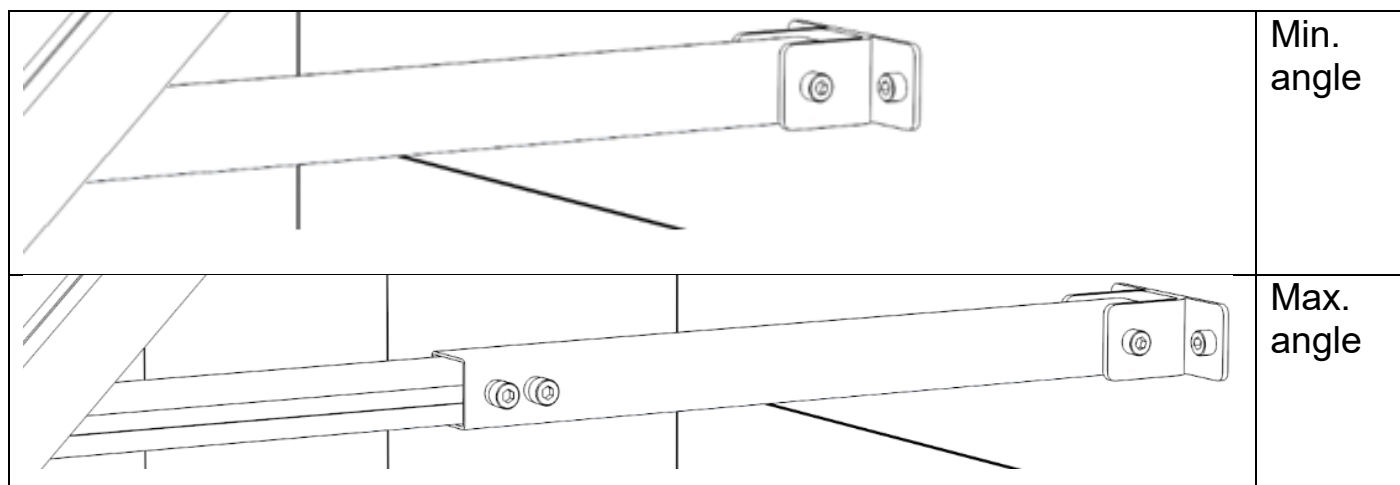


**Step 7: Finish (picture 18)**



## Angle adjustment

- By loosening and adjusting the screws you can change the angle of the back leg.
- The angle adjustment is stepless and depending on the size of the solar panel.



## Technical specifications

| Modell                  | TX-245  | TX-246                                       |
|-------------------------|---|--|
| Suitable for            | TX-212, TX-213<br>(one solar panel)                                       | TX-220, TX-228, TX-241<br>(two solar panels) |
|                         | Nearly any size of common solar panel<br>(35mm frame thickness necessary) |  |
| Max. snow load          | Up to 143kg/m <sup>2</sup> (snow zone 2, Germany)                         |  |
| Max. wind force         | Up to 60m/s; 25m/s (wind zone 2; Germany)                                 |  |
| Material                | Stainless steel, Aluminum, Steel  |  |
| Mounting orientation    | Horizontal  |  |
| Mounting angle          | Up to 45° (depending on panel)  |  |
| <b>Dimensions</b>       |   |  |
| Inner rail (mm)         | 30x30   |  |
| Outer rail (mm)         | 35x35   |  |
| Length adjustable (mm)  | approx. 445 - 760   |  |
| Hooks (LxWxD) (mm)      | 145 x 45 x 60   |  |
| Material thickness (mm) | 2   |  |
| Weight                  | 6kg   | 12kg   |

## Support

Service phone No. for technical support: **01805 012643** (14 cent/minute from German fixed-line and 42 cent/minute from mobile networks).

Free Email: **support@technaxx.de**

The support hotline is available Mon-Fri from 9am to 1pm & 2pm to 5pm

## Maintenance

1x per year check the screw connections and nuts for tightness.

1x annually check mechanical components (e.g. telescope function of back leg) for tight fit and possible optical changes.

## Disposal



Disposal of the packaging. Sort packaging materials by type upon disposal.

Dispose of cardboard and paperboard in the waste paper. Foils should be submitted for recyclables collection.

Distributed by:  
Technaxx Deutschland GmbH & Co. KG  
Konrad-Zuse-Ring 16-18,  
61137 Schöneck, Germany

Solar panel bracket set TX-245  
Solar Panel Bracket 2 Set TX-246