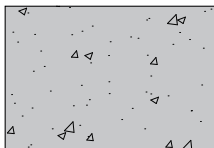
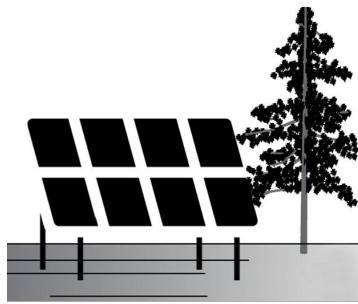


## Installations

Select



## Terrain



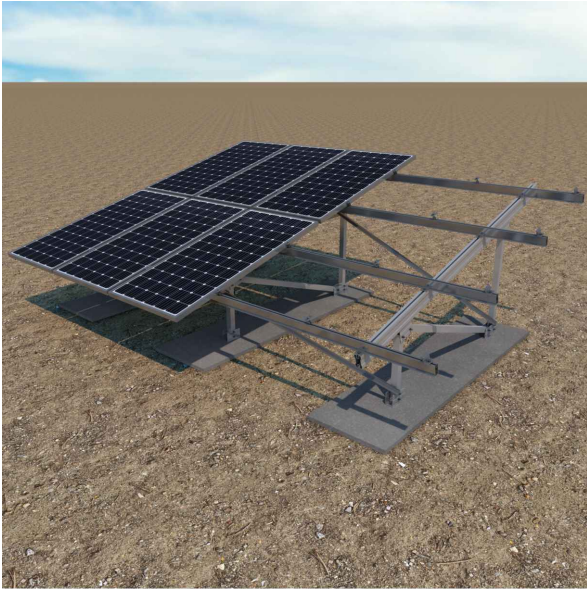
Concrete

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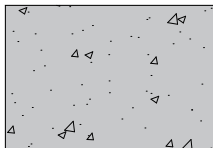
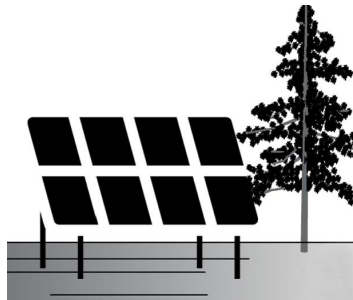
# SUNFER

Solar Mounting Systems

## 31V-EN



### Terrain



Concrete

## CONTENTS

1. **General information**
2. **Kit contents**
3. **Terrain assembly**
4. **Maximum admissible loads**
5. **Installation video**
6. **Certificates and guarantee**

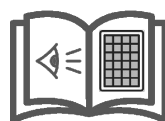
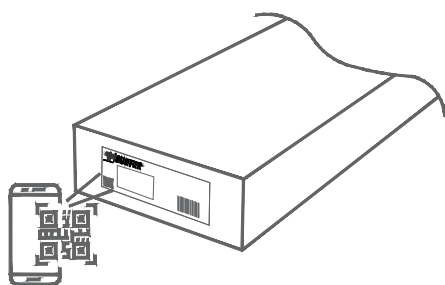


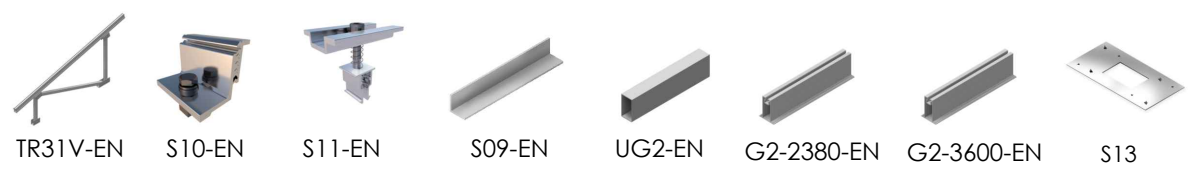
Return



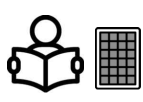
### General Information and Recommendations **ENG**

- All installation instructions and product specifications provided must be adhered to.
- Check the condition of the terrain and its carrying capacity. A geotechnical study of the terrain is encouraged.
- Distribute the panels so that the placement is symmetrical through the support, leaving the leftover at the extremes.
- Clamps must not be tightened using impact drivers.
- Check that the panels' support attachment points are compatible with the solar panel manufacturer's specifications.
- Uninstallation must be carried out in reverse order from the installation.
- During the shipping of products take extreme care to maintain the integrity of the packaging. Store in a dry, well-ventilated area. Minimize exposure to large temperature differences and humidity. Avoid outdoor storage. Avoid sources of dripping water, puddles, splashing, or any other contact with water in the storage area. If the product becomes wet, immediately dry and clean as well as possible. Do not leave the product directly on the floor or ground, where it may attract moisture. Store on the shipment's original pallet or on shelves.
- We reserve the right to make changes to our products at any moment without prior warning if, from our point of view, these changes are necessary for quality improvement. All illustrations in plans and catalogues may be only examples and therefore may differ from the actual product provided.
- Aluminium components can be delivered in different finishes without compromising the structural solution. Available finishes: raw/anodised/lacquered.

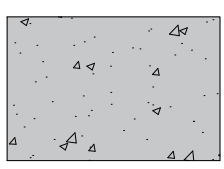




	TR31V-EN	S10-EN	S11-EN	S09-EN	UG2-EN	G2-2380-EN	G2-3600-EN	S13
	2	8	4	4	-	4	-	6
	2	8	8	4	-	-	4	8
	3	8	12	4	4	8	-	10
	3	8	16	4	4	4	4	12



Anchorage surface:



Concrete

Max.  
2279x1150 mm  
Thickness:  
28-40 mm

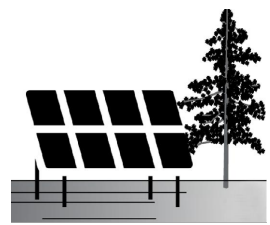


Profiles of **EN AW 6005A T6 aluminum**



Fasteners of **A2-70 stainless steel**

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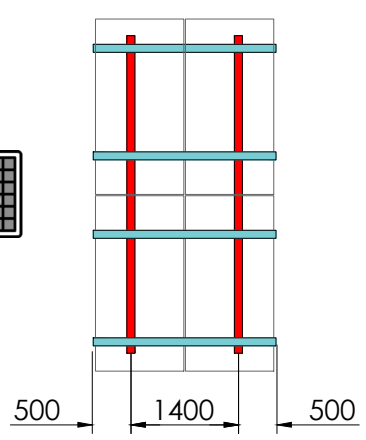


# 31V-EN

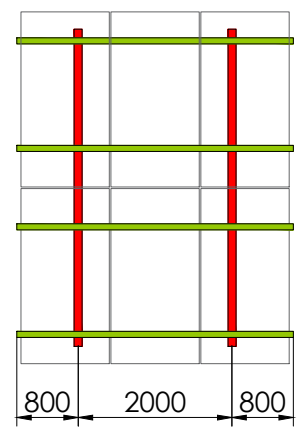
## Anchor spacing

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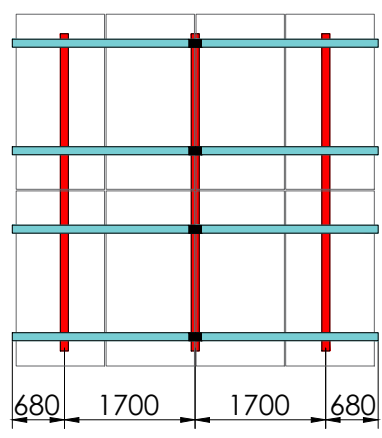
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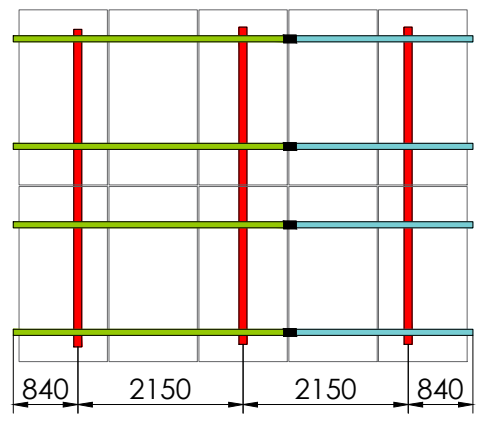
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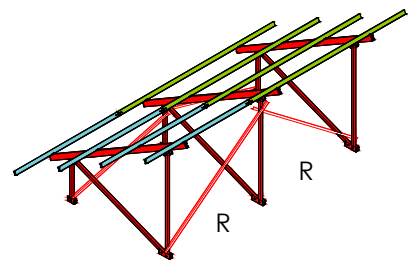
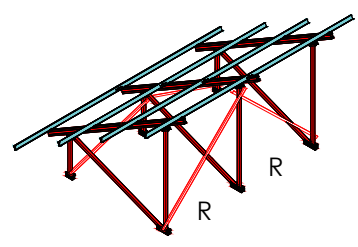
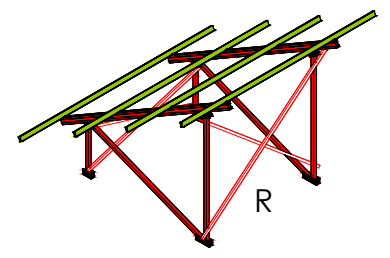
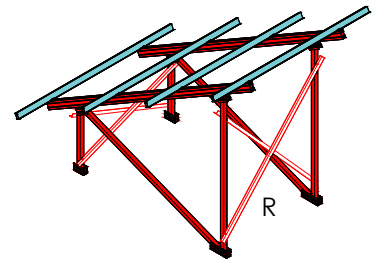
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10



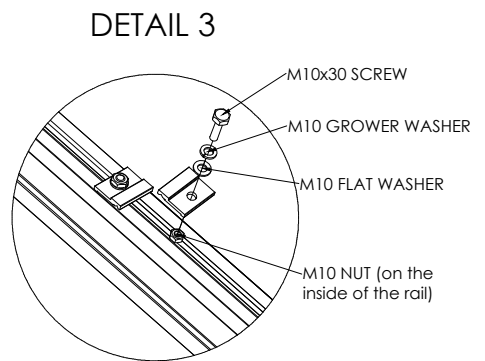
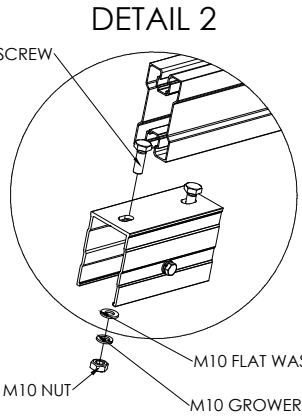
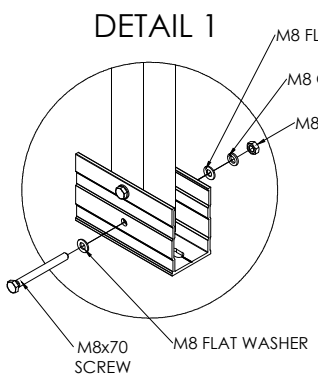
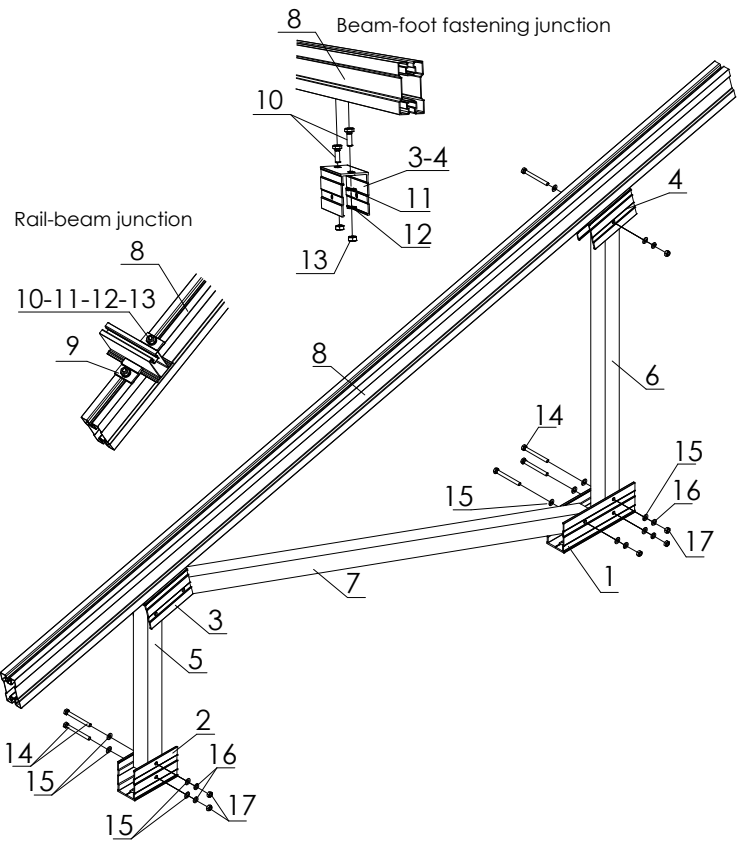
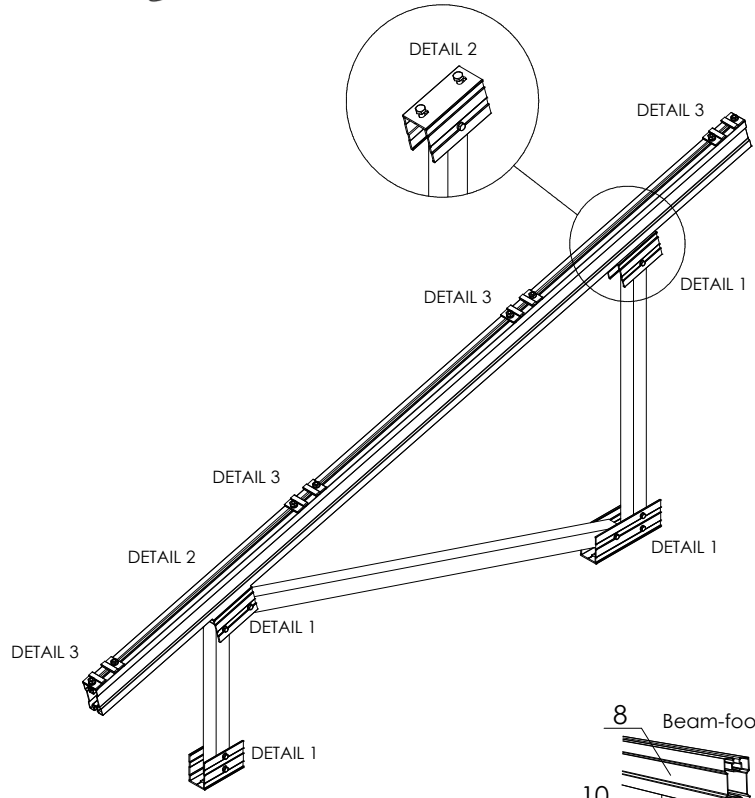
TR31V-EN  
  
 G2-2380-EN  
  
 G2-3600-EN  
  
 UG2-EN  
  
 R  
 S09



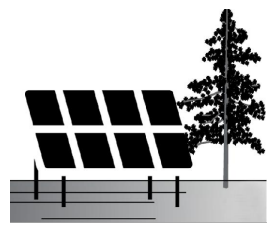
Number of pieces per gantry:

17		M8 nut	-	8
16		M8 Grower	-	8
15		M8 washer	-	16
14		M8L70 screw	70	8
13		M10 nut	-	12
12		Grower M10	-	12
11		M10 washer	-	12
10		M10L30 screw	30	12
9		Rail-beam junction	50	8
8		Beam	3600	1
7		Diagonal gantry	2211	1
6		Rear foot	2085	1
5		Front foot	810	1
4		Rear foot-beam fastening	150	1
3		Front foot-beam fastening	150	1
2		Front base	150	1
1		Rear base	250	1
Number of gantries				1

Element	Detail	Description	Length mm	Units
---------	--------	-------------	-----------	-------



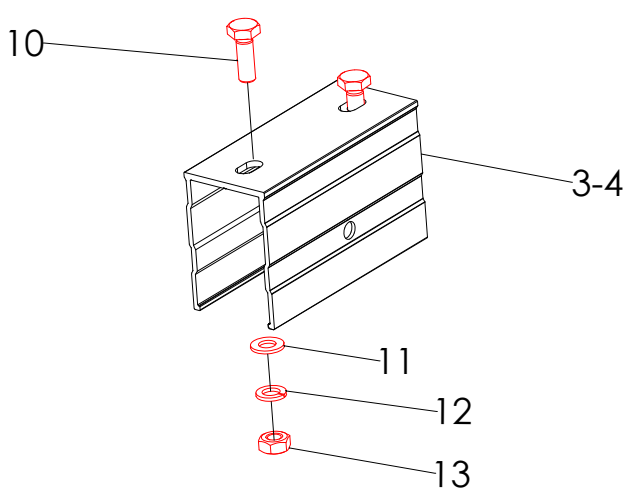
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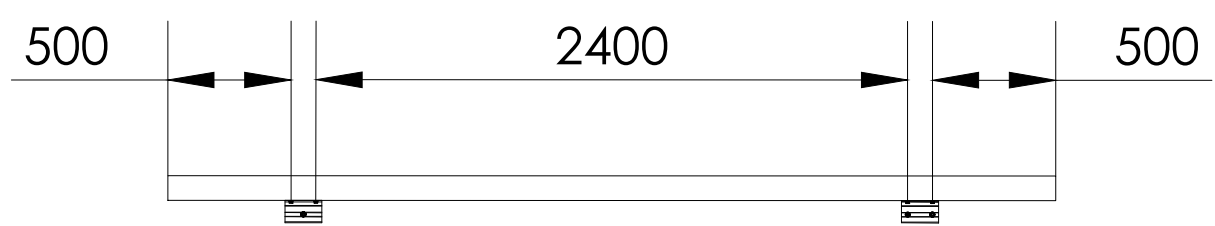
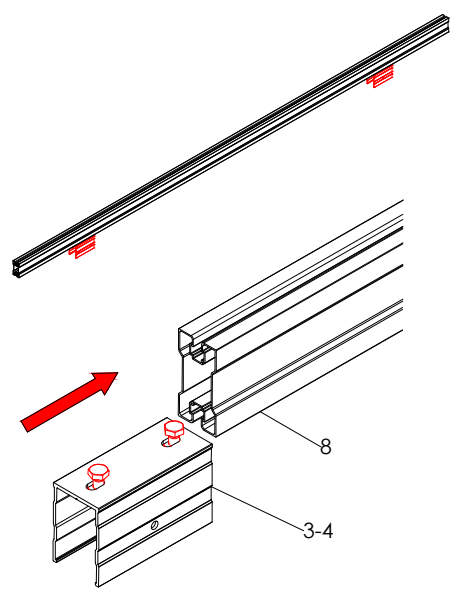
# 31V-EN

## Triangle assembly

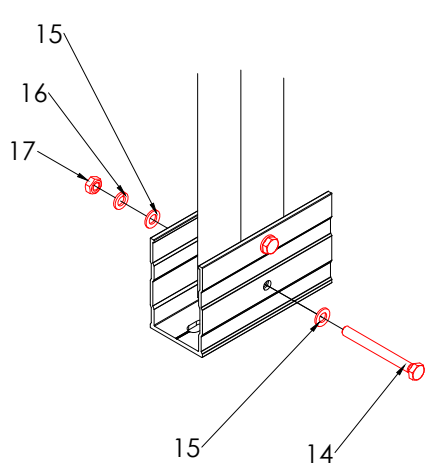
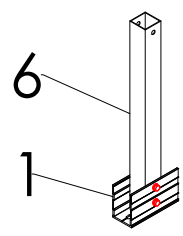
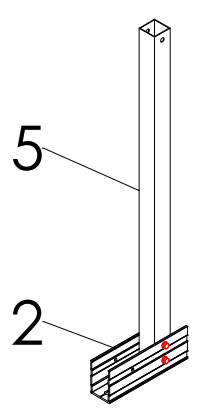
**1.**



**2.**

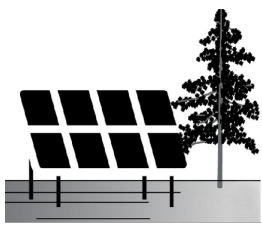


**3.**



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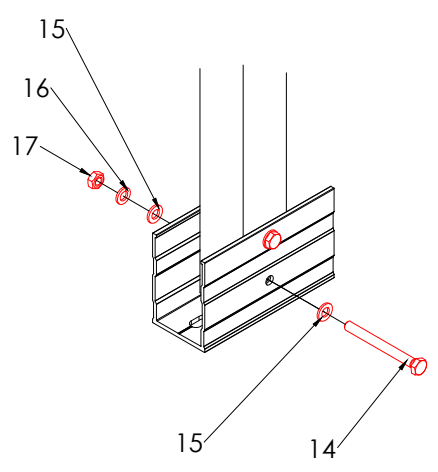
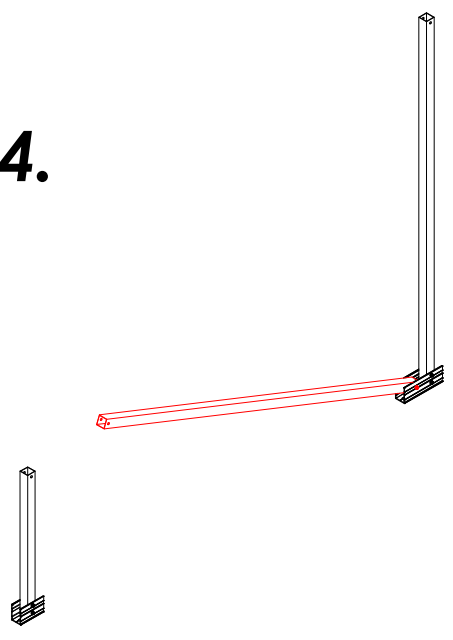




# 31V-EN

## Triangle assembly

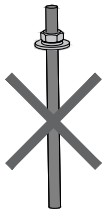
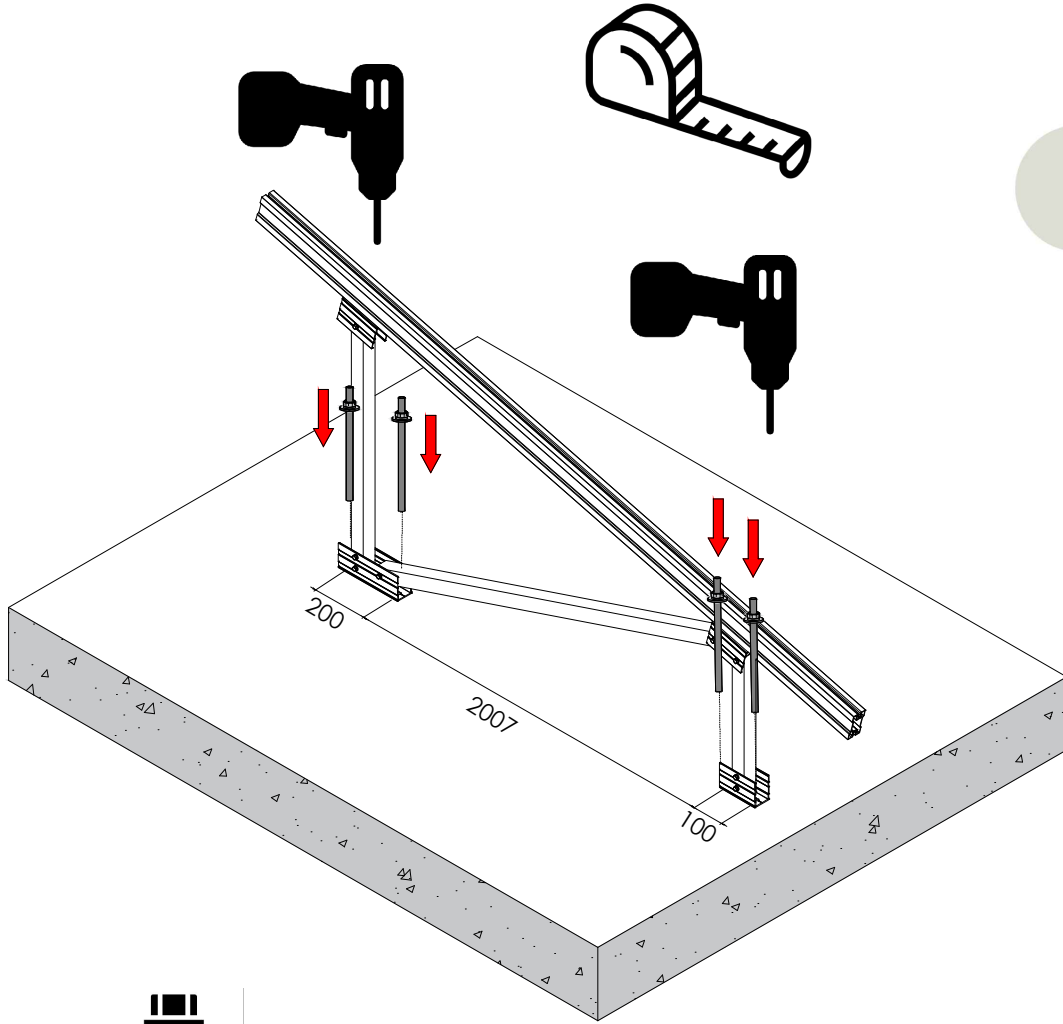
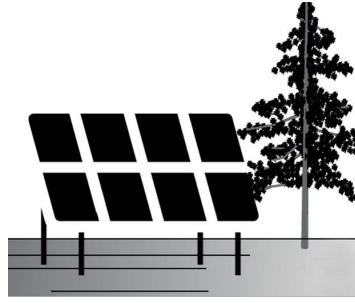
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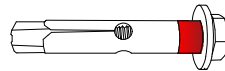
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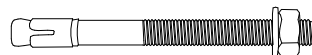


Anchor fasteners not included



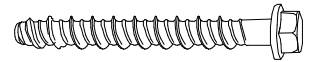
### Expandible screw

Run-through screws for fastening medium use objects, structural applications and uncracked concrete



### Tapping screw

High-performance tapping screw for static loads on uncracked concrete



### Direct-fastening screw

Direct-fastening screw of maximum performance for quicker permanent anchors on concrete



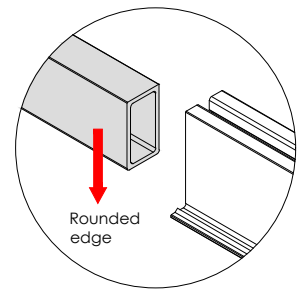
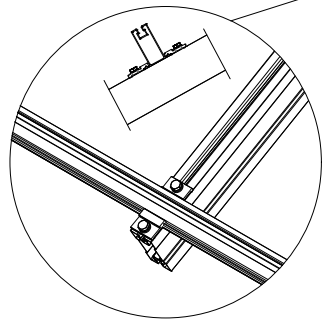
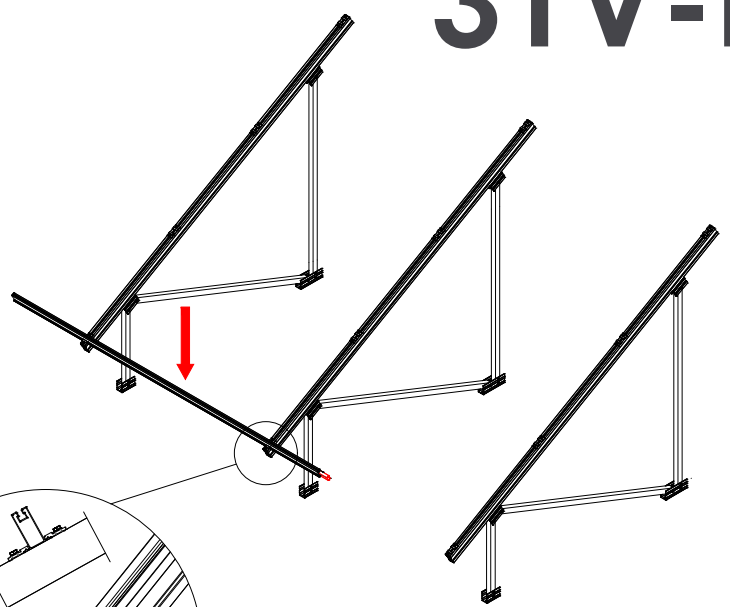
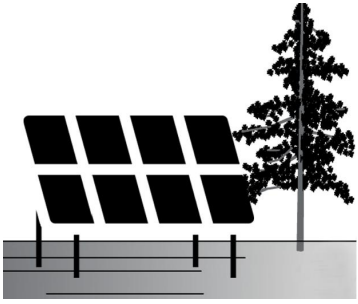
### Rod for chemical fastening

Fastening rod for injection fastening and capsule chemical fastenings



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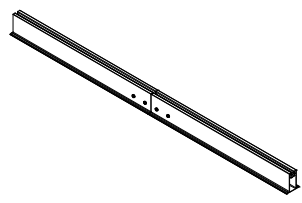
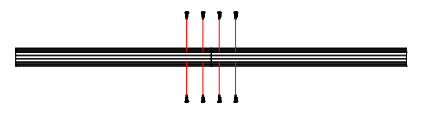
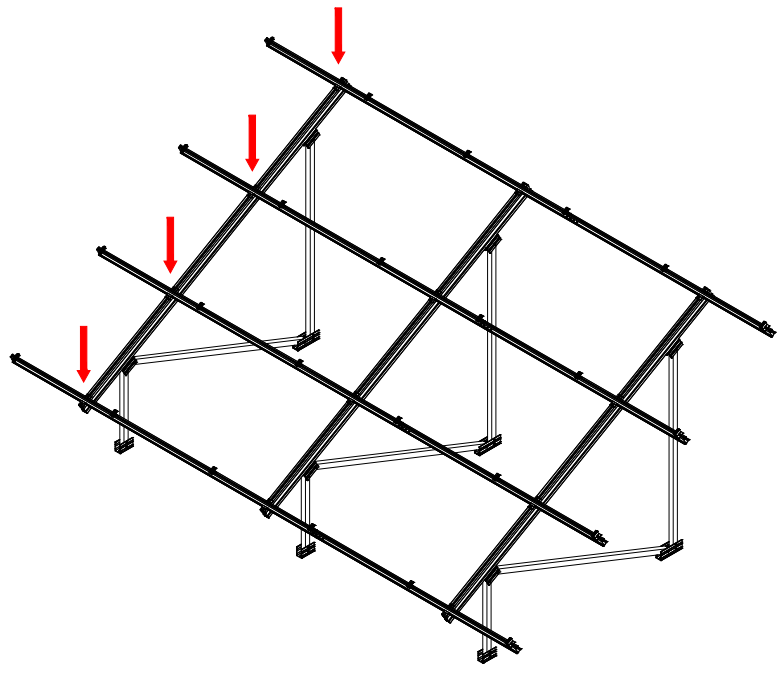
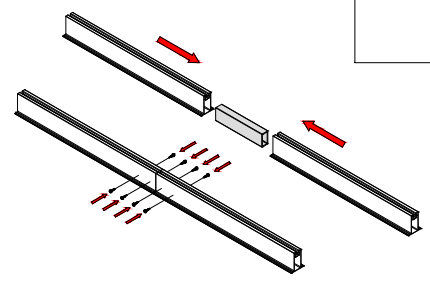
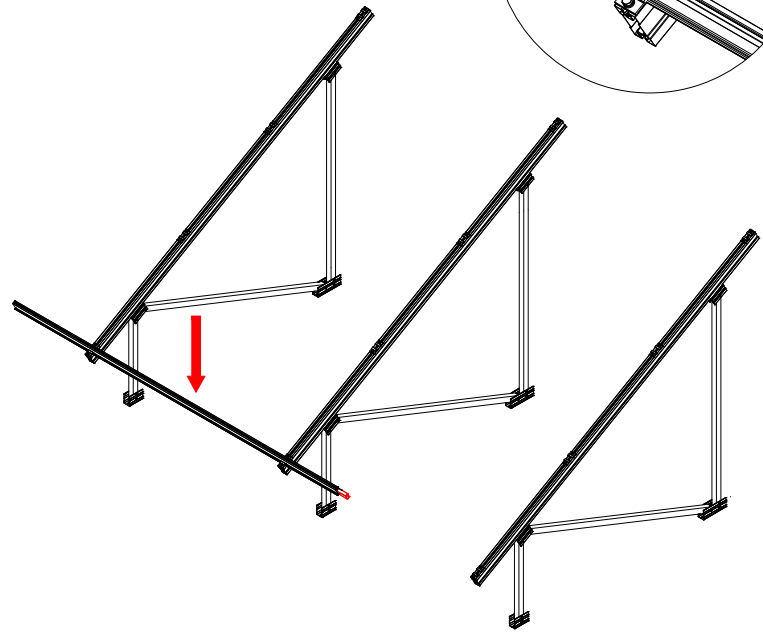
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**UG2-EN**

x1

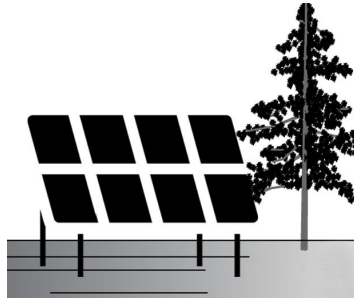
x8



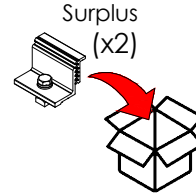
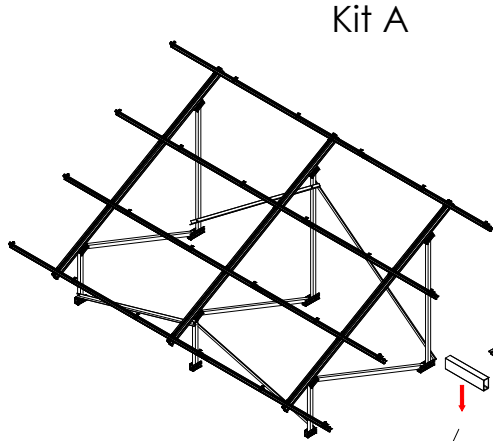
SW8

6 Nm





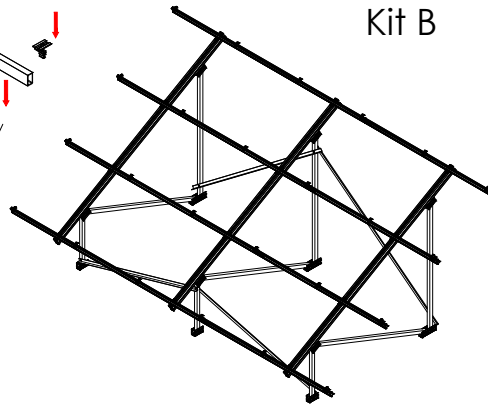
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There are four S10-EN extra per kit

**S17.2-EN**  
Not included

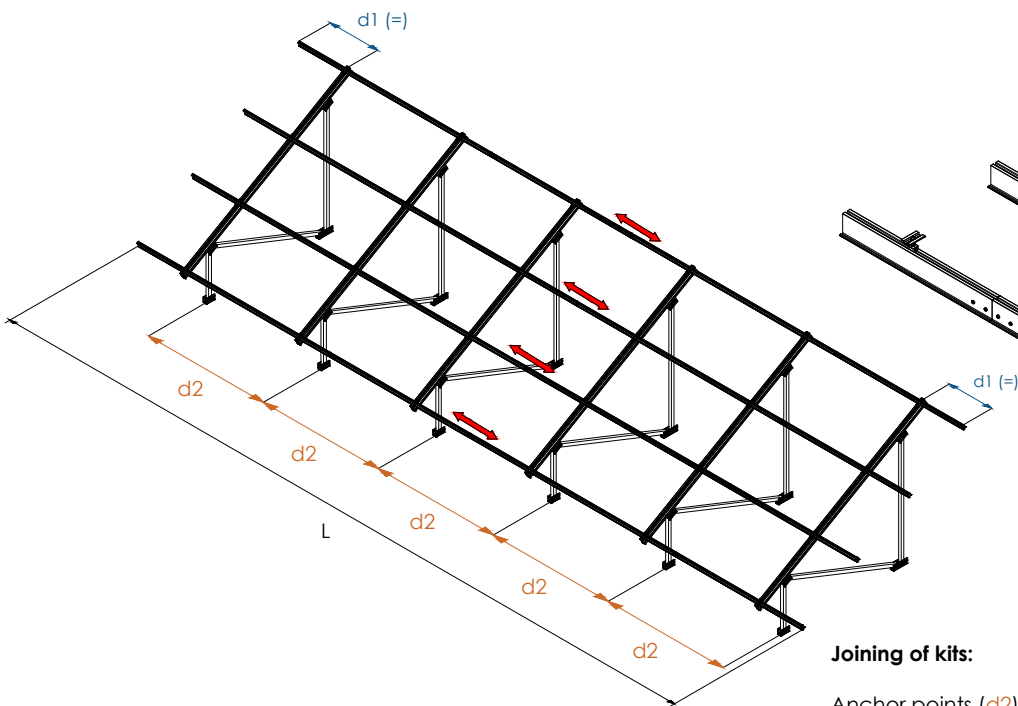
- x4
- x32
- x4



S17.2-EN



Consult UG2-EN assembly



$L \leq 20m$

$d2 \leq 2000$

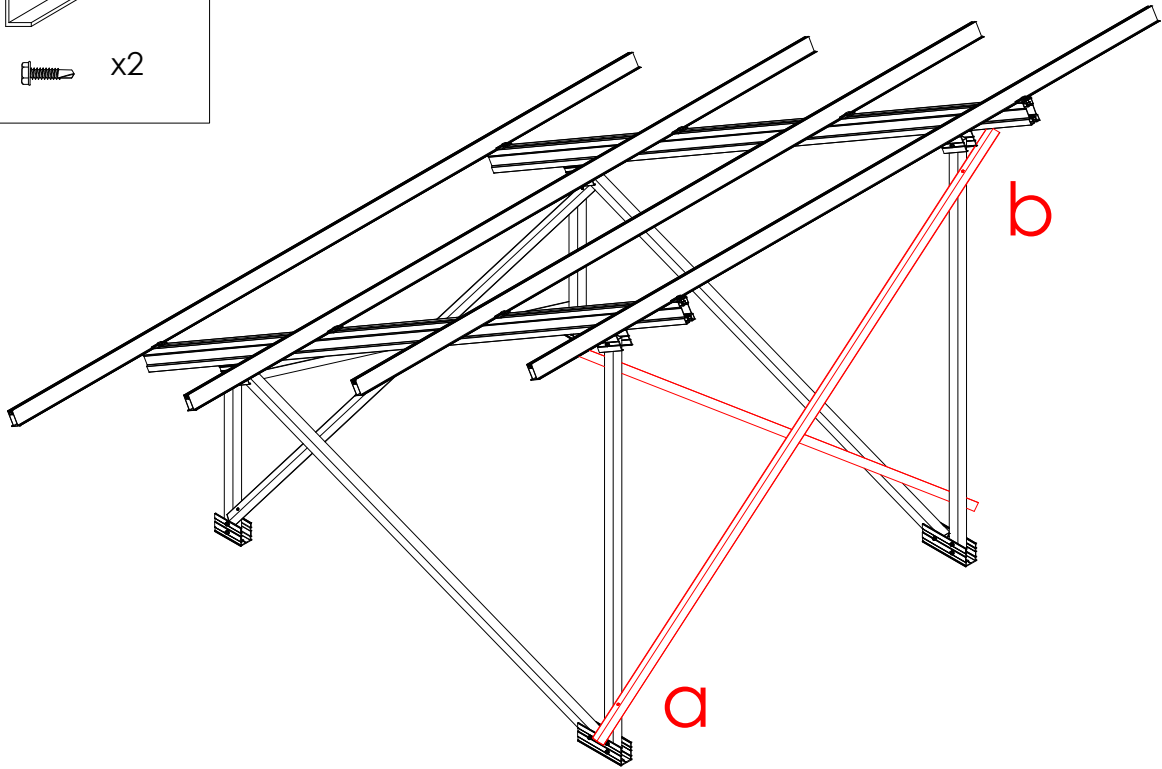
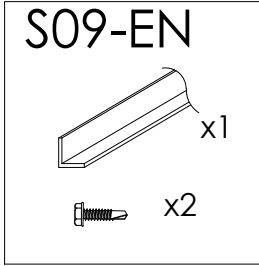
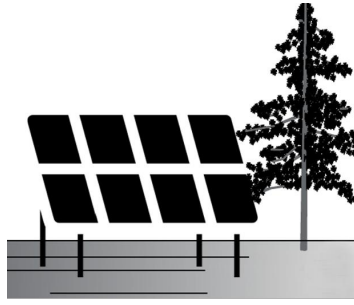
$0,2 * d2 \leq d1 \leq 0,33 * d2$

**Joining of kits:**

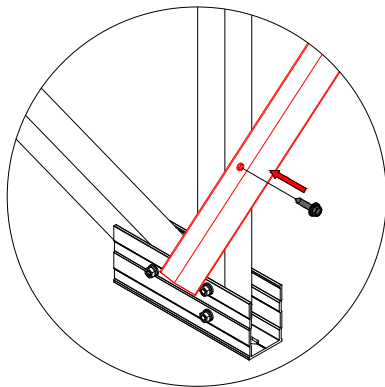
Anchor points (d2) must be equidistant

Arrange profiles such that the overhand distance (d1) is the same on both ends (=)

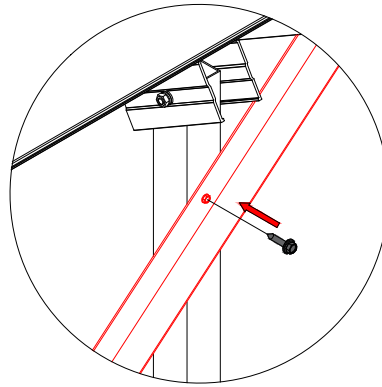




10 Nm

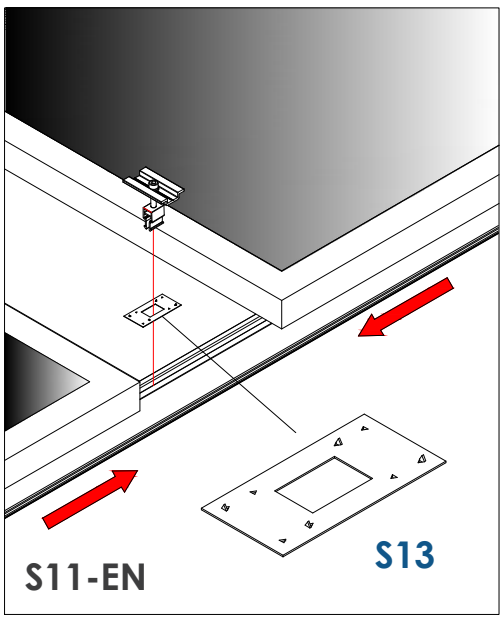
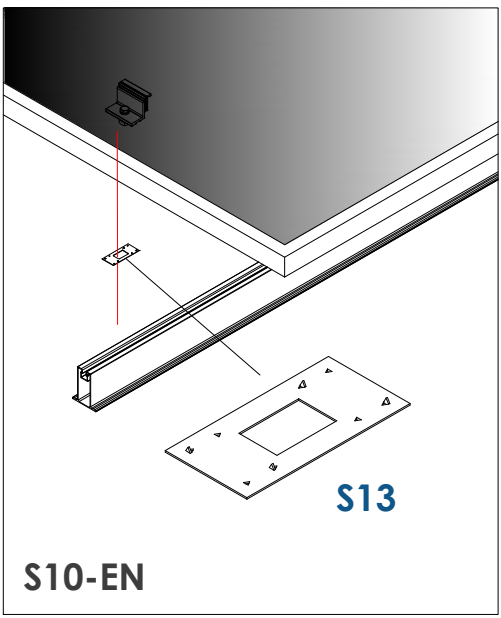
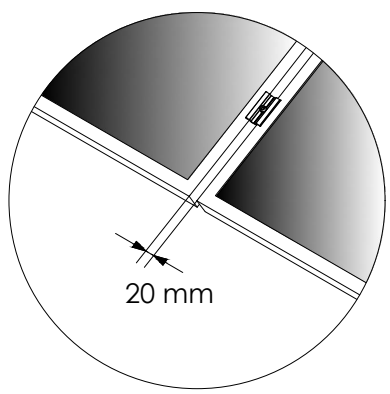
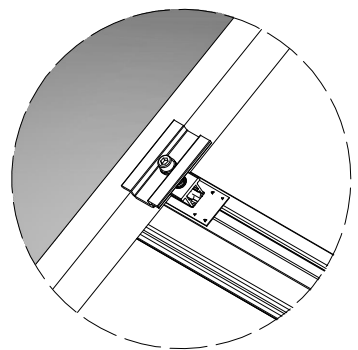
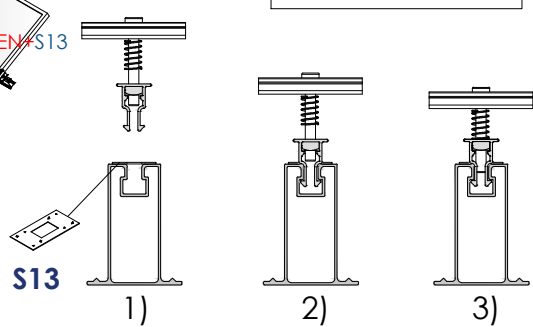
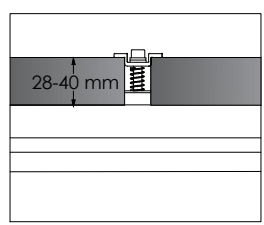
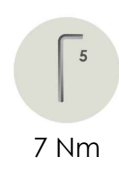
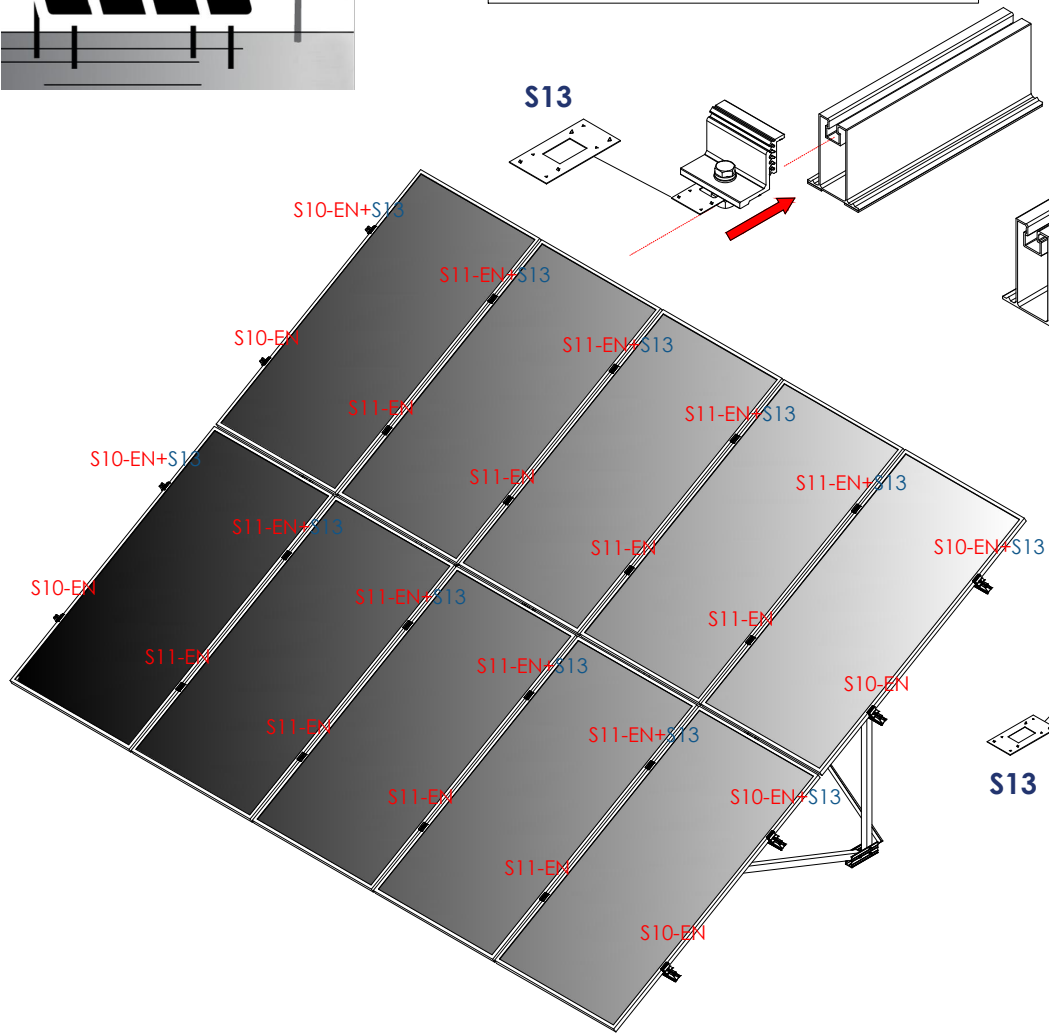
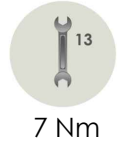
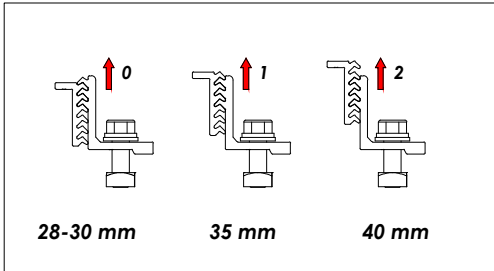
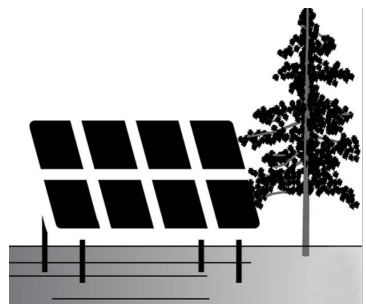


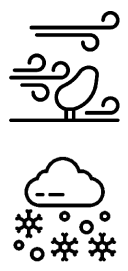
a



b

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Maximum admissible loads		<b>30°</b>	
		Loads	
		 (Km/h)	 (Kg/m <sup>2</sup> )
		110	215
		130	205
		150	200
		110	106
		130	100
		150	94
		110	150
		130	144
		150	138
		110	88
		130	81
		150	63

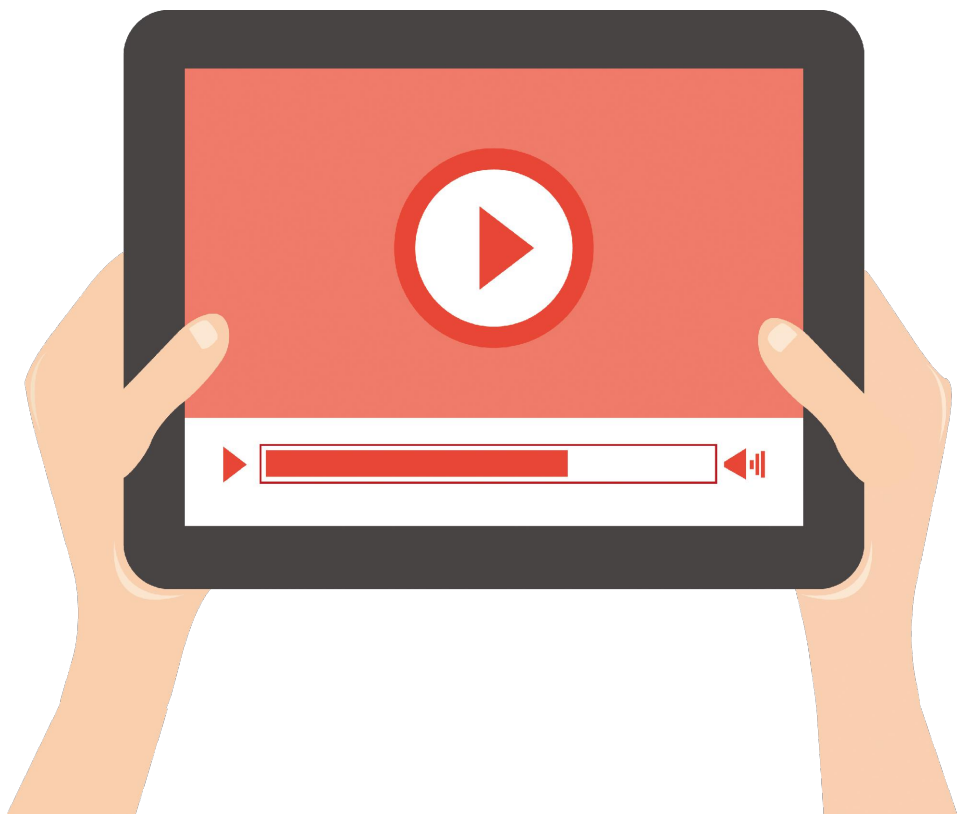
**Table 1** - Maximum admissible loads.

Loads calculated for the kit lengths and distances in the table. For other distributions consult SUNFER.



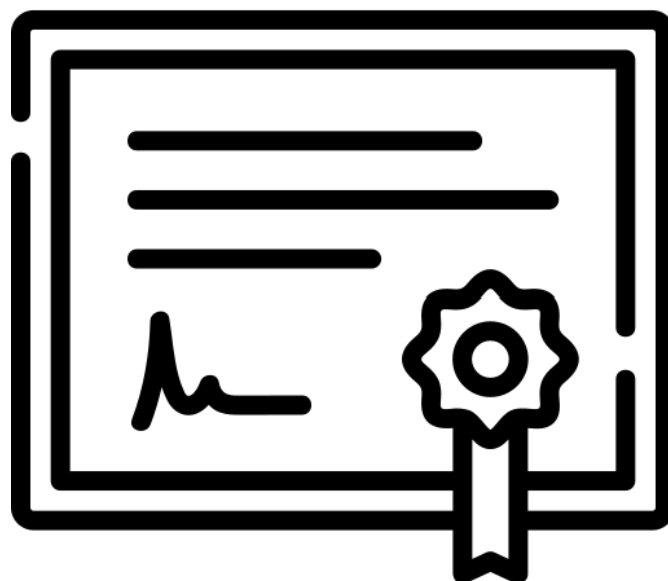
# 31V-EN

## Installation Video



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- ISO 9001 certificate
- ISO 14001 certificate
- CE marking
- Guarantee

This is a translation of the certificate ES13/13899

The management system of

# SUNFER ESTRUCTURAS, S.L.U.

Camí de la Dula, s/n, 46687 Albalat de la Ribera, Valencia

has been assessed and certified as meeting the requirements of

**ISO 9001:2015**

For the following activities

Design, manufacture and sale of solar energy structures.

This certificate is valid from 19 May 2023 until 8 April 2025 and remains valid subject to satisfactory surveillance audits.

Issue 6. Certified with SGS since 8 April 2013

Last certificate expiry date 8 April 2022

Recertification audit date 31 March 2022

Authorised by \_\_\_\_\_

SGS International Certification Services Iberica, S.A.U.

C/Trespaderne, 29. 28042 Madrid. España

t +34 91 313 8115 - [www.sgs.com](http://www.sgs.com)



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This is a translation of the certificate ES22/211172

The management system of

# SUNFER ESTRUCTURAS, S.L.U.

Camí de la Dula, s/n, 46687 Albalat de la Ribera, Valencia

has been assessed and certified as meeting the requirements of

**ISO 14001:2015**

For the following activities

Design, manufacture and sale of solar energy structures.

This certificate is valid from 19 May 2023 until 22 April 2025 and remains valid subject to satisfactory surveillance audits.

Issue 2. Certified with SGS since 22 April 2022

Authorised by \_\_\_\_\_

SGS International Certification Services Iberica, S.A.U.

C/Trespaderne, 29. 28042 Madrid. España

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**IDENTIFICATION NUMBER OF NOTIFIED ORGANISM:**

1181

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**NUMBER AND REGISTERED ADDRESS OF MANUFACTURERS. INSTALLATION LOCATION:**

Business name: *SUNFER ESTRUCTURAS, S.L.U.*

Address: *Camí de la Dula s/n*

Postal Code: *46687*

Location: *Albalat de la Ribera*

City: *Valencia*

Country: *España*

**TWO LAST DIGITS OF THE YEAR THAT THE MARKING WAS FIXED:**

19

*ES19/86524*

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**EN 1090-1**

Description of product:

**31V-EN**

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**TOLERANCES IN GEOMETRIC INFORMATION:** *EN 1090-3*

**WELDABILITY:** --

**FRACTURE RESISTANCE:** --

**FIRE REACTION:** *Classified material A1*

**CADMIUM EMISSION:** *N/A*

**RADIOACTIVITY EMISSION:** *N/A*

**DURABILITY:** *N/A*

**STRUCTURAL CHARACTERISTICS:**

- **Carrying capacity:** *See product instructions and data sheet*
- **Fatigue resistance:** *N/A*
- **Fire resistance:** *N/A*
- **Manufacturing:** *According to the component specification and EN1090-3. Execution class EXC1*

 <b>SUNFER</b>	<b>DECLARATION OF PERFORMANCE</b>	DdP
		REVISION 01

DECLARATION OF PERFORMANCE NUMBER:	P-0137
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### 1. PRODUCT DESCRIPTION.

UNIQUE IDENTIFICATION CODE OF THE PRODUCT TYPE:	31V-EN
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### 2. NAME AND ADDRESS OF MANUFACTURER.

NAME:	SUNFER ESTRUCTURAS, S.L.U.
COMERCIAL NAME (if exists):	--
ADDRESS:	CAMI DE LA DULA S/N
CITY AND PC:	46687 ALBALAT DE LA RIBERA -- COMUNIDAD VALENCIANA (SPAIN)

### 3. INTENDED USE(S) OF THE PRODUCT:

ALUMINUM STRUCTURE TO SUPPORT PHOTOVOLTAIC PANELS.

### 4. SYSTEM OF EVALUATION AND VERIFICATION OF CONSTANCY OF PERFORMANCE:

System 2+

### 5. HARMONIZED STANDARD:

This product complies with the provisions of Annex ZA of the European standard **UNE-EN 1090-1:2011 + A1:2012**

### 6. NOTIFIED ORGANISM:

NAME:	<b>SGS ICS IBÉRICA. S.A.</b>
Notified Organism Number:	<b>NB1181</b>

### 7. DECLARED PERFORMANCES:

Essential Characteristics	Performances	Harmonised technical specifications
Tolerances in geometric information	Conforms to limits for essential tolerances <input type="checkbox"/>	EN 1090-3
Weldability	Not applicable because there is no welding in the structure	----
Fracture Tenacity	Not required for aluminum components	-----
Carrying Capacity	N/A	
Fatigue Resistance	N/A	
Fire Resistance	N/A	
Fire reaction	Class A1	EN 13501-1
Emission of cadmium and its compounds	OK	
Emission of radioactivity	OK	
Durability	N/A	
Structural features	See product data sheet	UNE EN 1999-1-1
- Carrying capacity	N/A	
- Fatigue resistance: N/A	N/A	
- Fire resistance: N/A	N/A	
- Manufacturing	According to the component specification. Execution class EXC1	UNE EN 1090-3

- The performance of the product identified above is in accordance with all the declared performance.
- This declaration of performance is issued in accordance with Regulation (EN) No. 305/2011 under the responsibility of the manufacturer identified above.

Manufacturer's Name: Voro Gómez Nacher

Date of issue: 02/08/2023

Signature:





## Warranty Terms and Conditions

Structural and anti-corrosion warranty

The supports manufactured by SUNFER, are manufactured under strict production control in the factory as well as our raw materials that are tested and controlled periodically, so we can offer the following guarantee for our products

Structural guarantee of twenty-five (25) years.

Anti-corrosion guarantee according to table 1.

Materials	NON-HARSH environment (1) Distance to coastline Greater than 5 Km	HARSH or MARINE environment Distance to coastline Less than 5 Km
Raw Aluminium	Fifteen (15) years	Five (5) years
Anodized Aluminium	Twenty-five (25) years	Twenty-five (25) years

Table 1.

(1) Non-exhaustive list of zones considered to be harsh environments:

- a. Industrial zones with emissions that include sulphur dioxide, nitrogen oxides, sulphuric acid, sulphuric compounds, chlorine, or other volatile gases; 5 km safety distance.
- b. Electric generating stations that use the following fuels: coal, natural gas, petroleum: 5 km safety distance.
- c. Petrochemical plants; 5 km safety distance.
- d. Cellulose factories; 5 km safety distance
- e. Wastewater treatment facilities: 500 m safety distance.

In these areas it is necessary to use anodised aluminium as long as the safety distance indicated above is not exceeded.

The adhesive warranty on 07.1H and S07.1 is ten (10) years. The warranty on the 2-sided adhesive tape of the S07.1 anchor covers the product supplied by Sunfer and can be applied provided that the breakage is caused by the profile tearing away from the adhesive tape. In the event that the breakage is caused by the adhesive tape tearing away from the cover, it will be considered a faulty assembly on site.

Mixed galvanised steel and raw aluminium supports such as, for example: Elevated, Monopoles, Car parks:  
Environments C3 fifteen (15) years guarantee.  
Environments C4-C5 five (5) years.

Mixed galvanised steel and anodised aluminium supports, such as: Elevated, Monopoles, Car parks:  
Environments C3 guarantee twenty-five (25) years.  
Environments C4-C5 fifteen (15) years.

This warranty applies to orders supplied from 03/01/2023, orders supplied prior to this date will be governed by the warranty document in force on the date of supply.

The warranty covers the final installation and therefore applies directly to the end user of the structure. In order to manage the warranties, the final customer will have to contact the distributor who has made the supply so that he can send it to the SUNFER Customer Service. The guarantee period starts from the date of the delivery note and it will be cancelled if the customer has not complied with the payment terms agreed in the invoice.

In order to execute the guarantee, the following documents must be sent:

- Sales invoice
- Date of commissioning.
- Details of the end customer.
- General photographs showing the entire installation.
- Detailed photographs:
  - o Fixing of the structure to the roof showing the distance between fixings.
  - o Assembled structure without photovoltaic modules.
  - o Rear view of the structure. Drawing of the affected area showing the distances between anchor points and distances between frames if applicable.



## Coverage and exclusions

### Coverage

This warranty covers the replacement and transport to the destination of the defective part or the product in its entirety free of charge. If the product is not available, a product of similar characteristics will be supplied.

The warranty is limited to the replacement of the defective product, so no costs associated with the return will be assumed: disassembly, as well as compensation for consequential damages, supplementary or related to loss of profits or other indirect costs.

The warranty covers all those metallic elements included in the SUNFER brackets.

### Exclusions

The warranty does not cover any defects resulting from:

- Inadequate assembly due to not following the SUNFER installation manuals.
- Excessive or insufficient tightening torques.
- Modifications or installations other than those recommended by SUNFER.
- Installation of auxiliary elements other than the supports supplied by SUNFER.
- Improper handling of the product during installation.
- Inadequate handling of the goods. Damage to the product after the shipment, inadequate storage of the product.
- All those purely aesthetic defects that do not affect the structural safety of the product.
- Installations in locations where wind or snow loads exceed those indicated in the product data sheet.
- Inadequate maintenance, see MAINTENANCE MANUAL.
- Fire or exposure to temperatures above 110 °C.
- Problems or defects caused by pollutants not initially contemplated (1).
- Natural disasters such as earthquakes, floods, hurricanes, tornadoes, cyclones, landslides and avalanches, volcanic eruptions or earthquakes.

For those supports in which the fixation to the surface is not included, SUNFER will not be responsible in case of pulling out or collapse due to an insufficient or badly installed anchorage.

### Guarantor, execution of Warranties.

The guarantor is SUNFER ESTRUCTURAS S.L.U., registered office at Camino de la Dula s/n 46687, Albalat de la Ribera, Valencia, Spain.

Claims arising in connection with this warranty cannot be transferred to third parties.

The law in force in Spain shall apply with regard to the warranty and any disputes relating to it.

