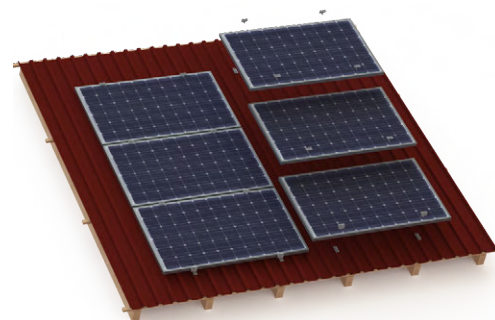
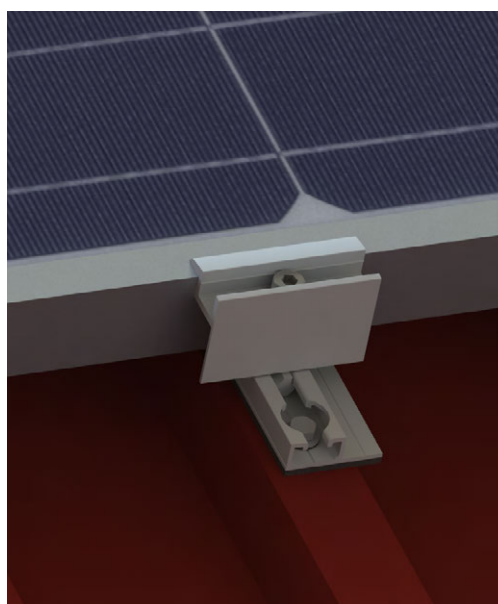
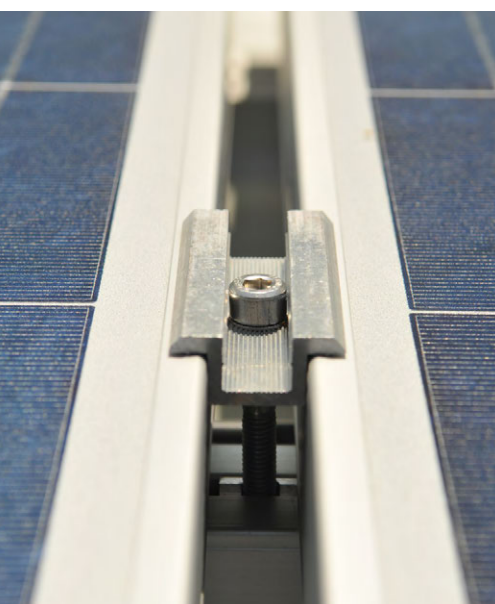


PROFINESS

VERBINDUNGS- & MONTAGESYSTEME

■ Mountingsystem for trapezoidal metal sheet ■ Installation example for direct mounting



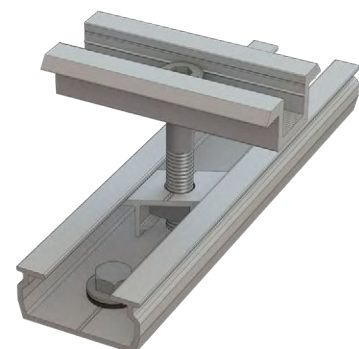
 **DEKRA**
INDUSTRIAL
BAUART GEPRÜFT

CHAPTERS

BASIC INFORMATION	03
ASSEMBLY OF CONTINUOUS PROFILES	04
Roof constuction	04
Components	04
MOUNTING	05
Mounting sequence for continuous profile-laying	05
Mounting sequence for profile-laying in pieces (each about 2 beads)	06
New version for landscape mounted modules (and clamping on the long side of the frame)	07
Predrilled high beading rail „Drehfix“	09
Trapezoidal sheet metal mounting with 5° additional inclination	10
CHECKLIST FOR TRAPEZOIDAL METAL SHEET ROOFS	11
CONTACT	12



Incl. new 5° elevation system



Incl. Drehfix2020

NEW

BASIC INFORMATION

We are delighted that you have chosen a PROFINESS system and thank you for your confidence in us. Please check, before construction starts, the completeness of the components based on our delivery note. Condition for any warranty claims is the observance of these installation instructions.

Observe the following instructions regarding laws, regulations and technical rules

When setting up solar energy installations applicable laws and regulations at regional, national and European, and international level have to be observed for the respective country.

It generally apply the general accepted rules of technology that have been usually formulated in the form of standards, guidelines, rules, regulations and technical rules by state and federal agencies, utility companies, and trade associations and committees in the relevant fields.

The entire PV system must be installed in accordance with generally accepted engineering standards. Please observe the accident prevention regulations of the professional associations (trade association regulation for safety and health at work), in particular:

BGV A1	General regulations
BGV A2	Electrical systems and equipment
BGV A3	Electrical systems and equipment
BGV C22	Construction work
BGV D36	Ladders and steps

Please note all public regulations and standards, DIN standards, TAB (technical connection conditions), accident prevention regulations, the guidelines of the Association of Property Insurers (VDE guidelines for fire protection), the technical rules of the German Roofing Trade and General guidelines (eg timber structures, roof Overlap - and roof sealing work) in the planning, construction, operation and maintenance of grid-connected PV systems.

These are in particular (not exhaustive):

DIN / VDE 0100 part 712 in particular (construction of power plants with rated voltages up to 1000V)
 DIN / VDE 0289 (Electrical cables)
 VDI 6012 (Decentralized energy systems in buildings - Photovoltaics)
 DIN / VDE 0185 Part 1- 4 (lightning protection)
 DIN 1055 Part 4 (wind)
 EN 1991-1-4 (wind loads Euro Code 1)
 DIN 1055 Part 5 (snow load)
 EN 1991-1-3 (snow loads Euro Code 1)
 DIN 18338 Roofing and roof sealing works
 DIN 18451 Scaffolding work
 DIN 1052 Part 2 and Part dimensioning of the substructure (wooden structures)
 TAB (technical connection conditions of the power company)
 DIN 18015 (design and construction of electrical installation in residential buildings)
 VDEW (guidelines concerning the connection and parallel operation of generators in the public low voltage network)
 DIN 4108 Thermal insulation
 Energy Saving Regulation (EnEV)

ATTENTION

Unauthorized modifications and inappropriate use of our components in assembly and construction of the system for all liability claims.

We would like to point out once again that when working on the roof, to observe accident prevention regulations (UVV) are (among others VBG 37 Construction work, § 12 Fall Protection).

Furthermore, we point out that before the planning and construction of the installation of the building (structural, rafters, battens), or the roof cladding or foil on the roof serviceability and tightness must be checked.

In foil roofs is to ensure that the compatibility of the roof sheet with the coating of the support surface used by Profiness tolerated.

It is to ensure that distances to the roof end / attica on each plant site are respected. If this border area is too small, so this affects possibly negative effect on the static and must be considered accordingly.

The modules, the dimensions are gem. Data observed in order to ensure the ventilation of the PV system. (See data sheet).

Work and knowledge requirement of processors and installers

PROFINESS assumes that the assembly will be done only by competent personnel with a recognized qualification -or- (by a state or federal organization) appropriate knowledge - carried out the relevant technical area.

Basic information regarding screwing with self-drilling screws on trapezoidal sheet metal:

To prevent the screw from turning and especially to avoid damaging the sealing washer, we recommend a tightening torque of **3 - max. 5 Nm**.
(Under no circumstances higher!)



We recommend a not too high processing speed of approx. 1,200 rpm when screwing onto trapezoidal sheet metal.

ASSEMBLY OF CONTINUOUS PROFILES

ROOF CONSTRUCTION

The trapezoidal rails Profiness31 (1.3cm height) and Profiness31-60 (6cm height) are the connecting piece between the roof and the module. First, the EPDM sealing tape is adhered to the beads or to the rail, then the profile is placed. The connection to the roof is made by self-drilling screw or rivet with building approval.



COMPONENTS

PROFINESS31 flat



Length 6.2 meters or cut to bridge for 2 beads

Self-drilling screws 6.3x25 with building authority approval.
Also available as thin sheet metal screw 6.0x25

PROFINESS31 6cm high



Length 6.2 meters or cut to bridge for 2 beads

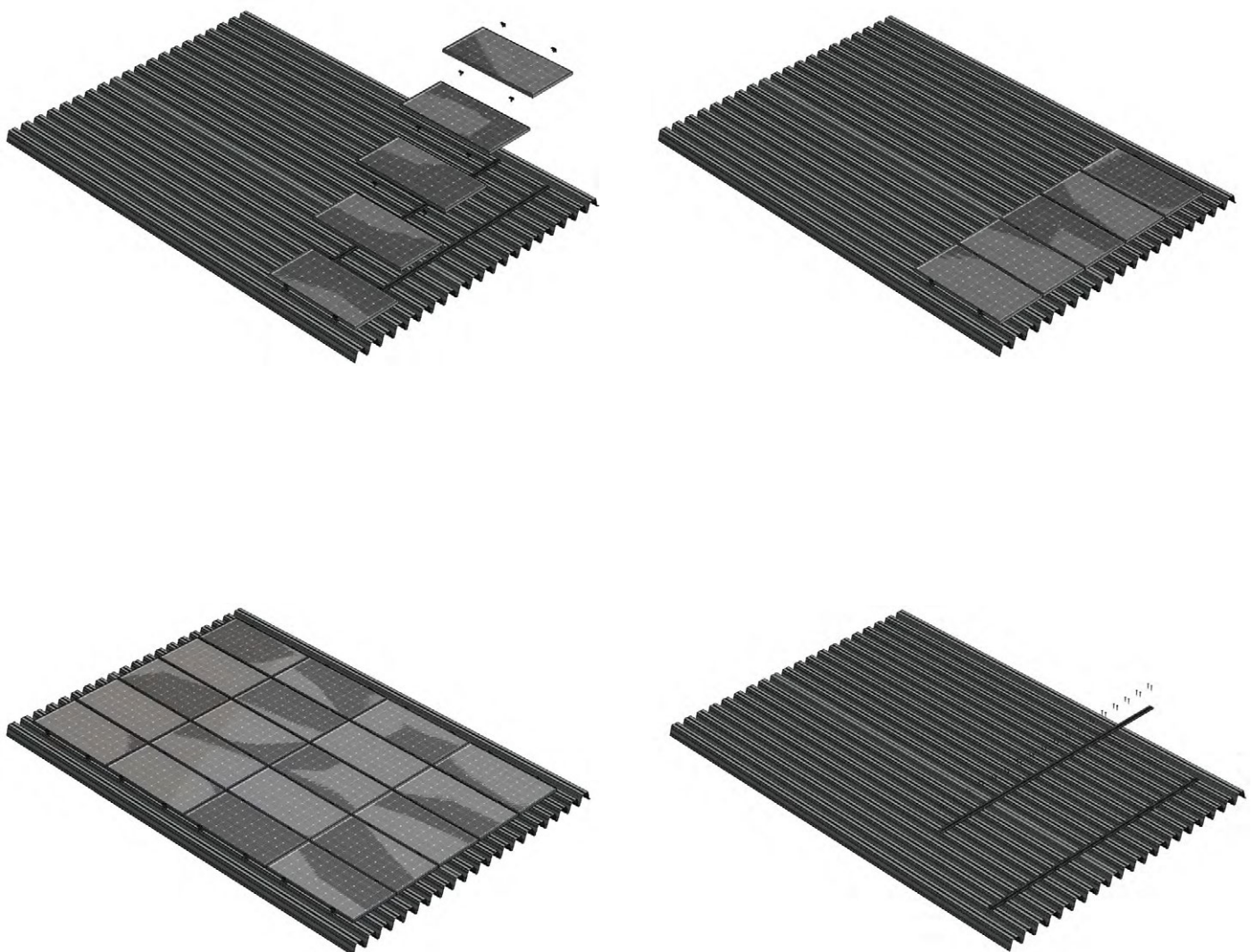
Self-drilling screws 6.3x25 with building authority approval.
Also available as thin sheet metal screw 6.0x25

It must be ensured that the adjacent components and fastening materials also have sufficient strength and can absorb and transfer the loads. We can statically calculate the number of fastening points free of charge; the statics of the roof substructure in connection with the local conditions must be checked on site.

MOUNTING

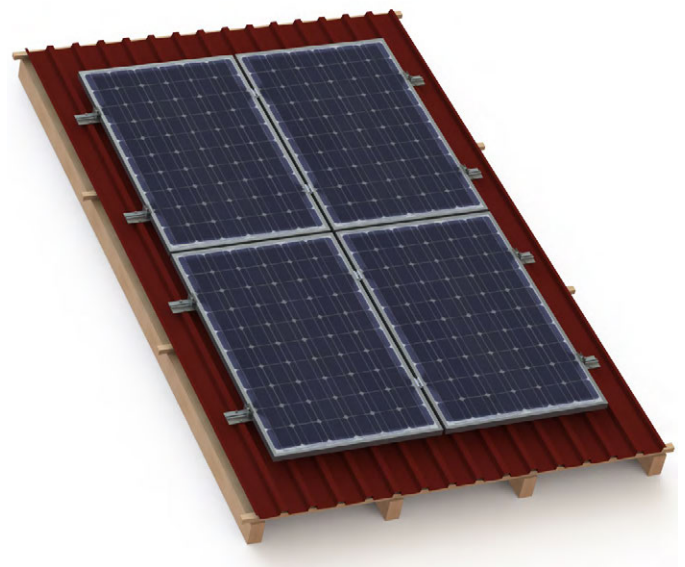
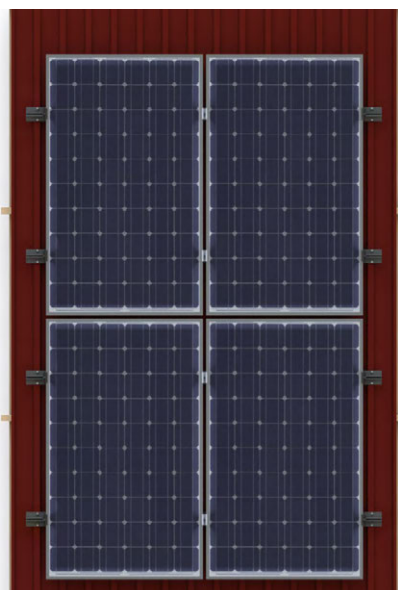
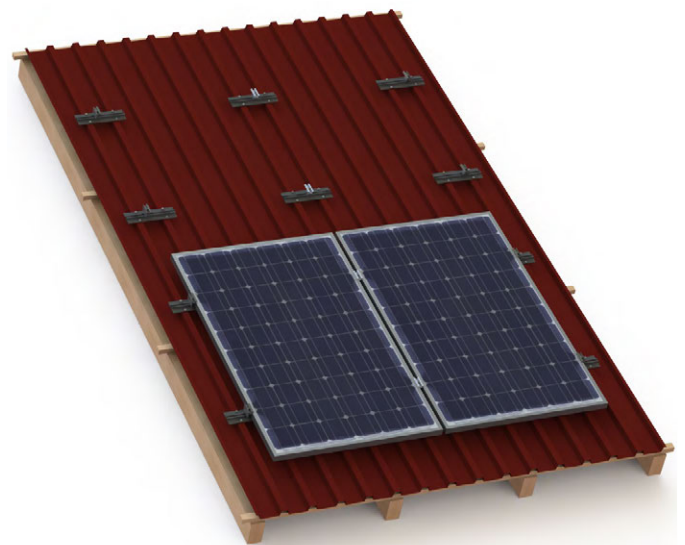
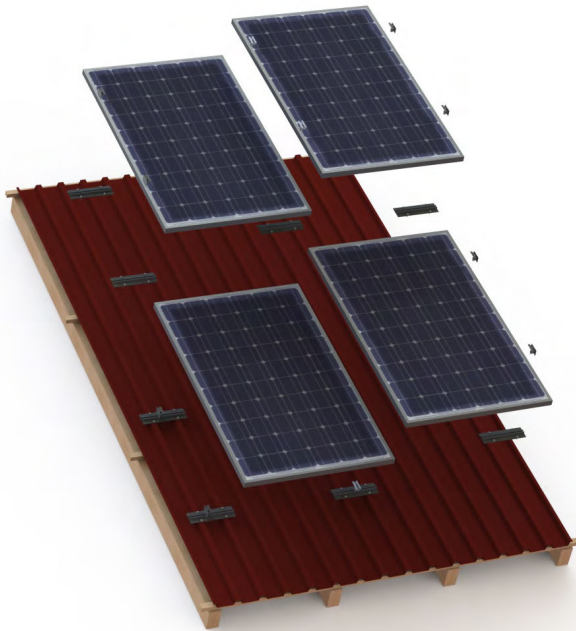
MOUNTING SEQUENCE FOR CONTINUOUS PROFILE-LAYING

As a rule, the EPDM sealing tape is cut into pieces to match the bead width and glued onto the beads. The profiles are then The profiles are then screwed onto the beads according to the module layout and matching the clamping area of the modules. Always drill 2 holes (i.e. 4 in total) on the beads before and after a module clamp. (i.e. a total of 4 self-drilling screws per module clamp) or more, depending on the result of the static calculation.



MOUNTING SEQUENCE FOR PROFILE-LAYING IN PIECES (EACH ABOUT 2 BEADS)

For each module clamp, one rail piece is screwed to the top beads with 4 self-drilling screws. The positioning depends on the module assignment and the clamping area of the modules. Depending on the result of the project statics, more than 2 module clamps per frame side may have to be mounted in edge areas.

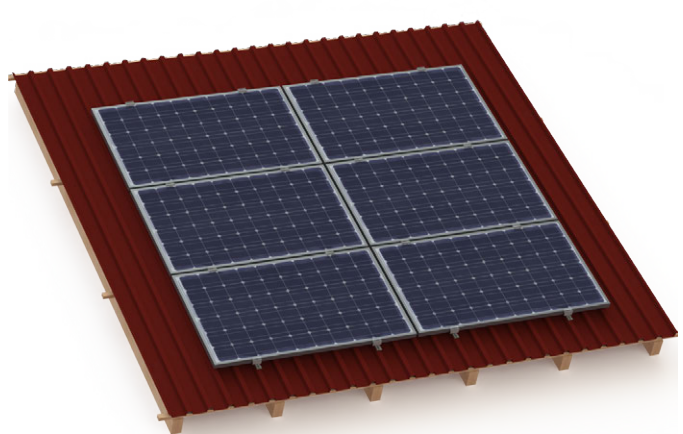
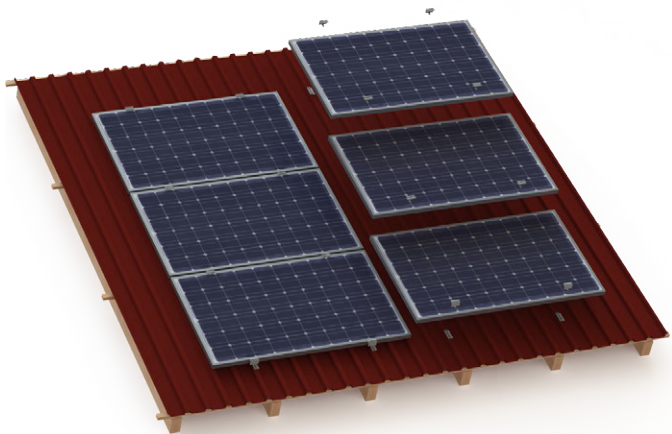
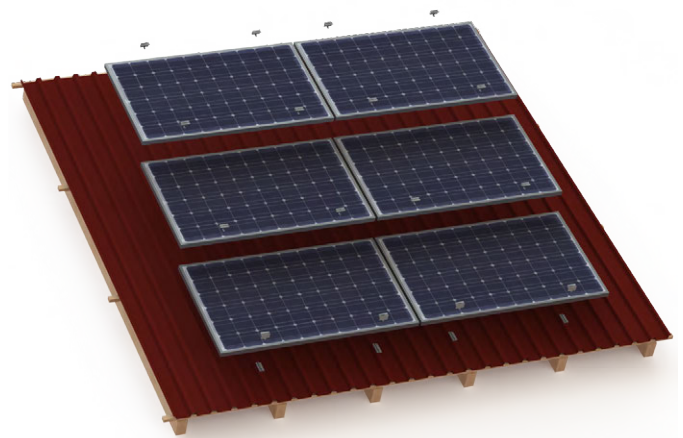
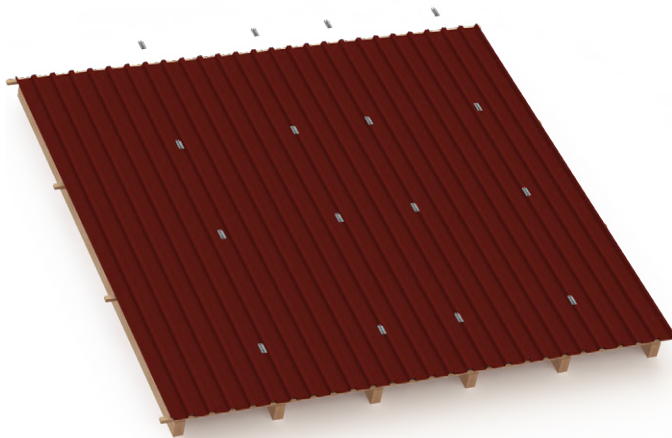


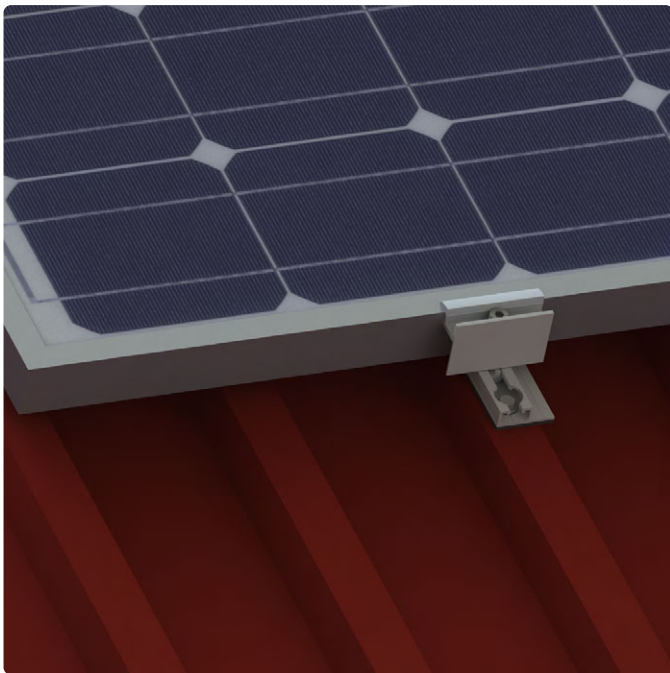
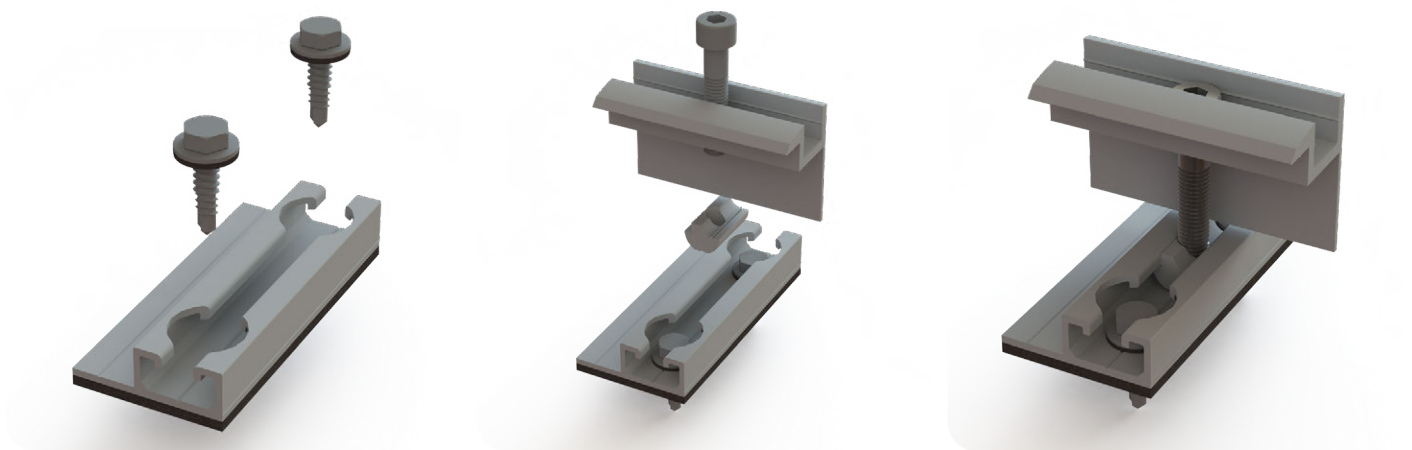
NEW VERSION FOR LANDSCAPE MOUNTED MODULES (AND CLAMPING ON THE LONG SIDE OF THE FRAME)

Thus modules landscape mounted not need to be clamped to the short side, we have developed a new profile, which is mounted only on the upper bead and towards this. Fixing is by two self-drilling screws, which are sufficient in most sheet constellations. If more drilling screws are required according to the project statics, additional short rails and clamps must be fitted on each side of the frame.

The fastening of the modules is analogous to that in the previous pages, only that the modules are landscape that clamping is also on the long module frame side.

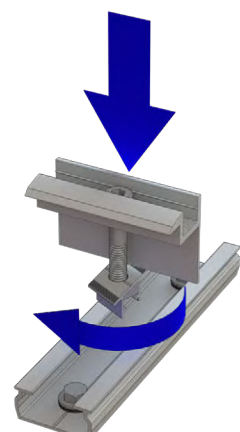
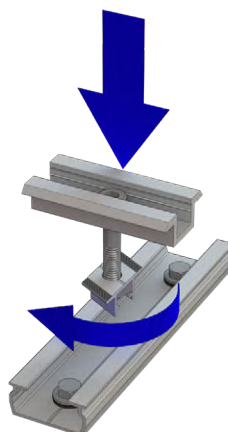
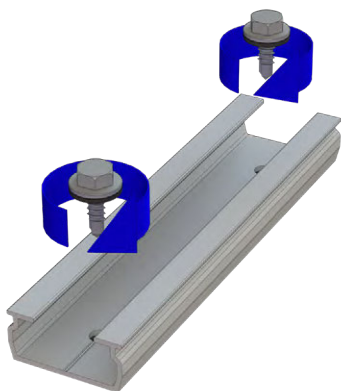
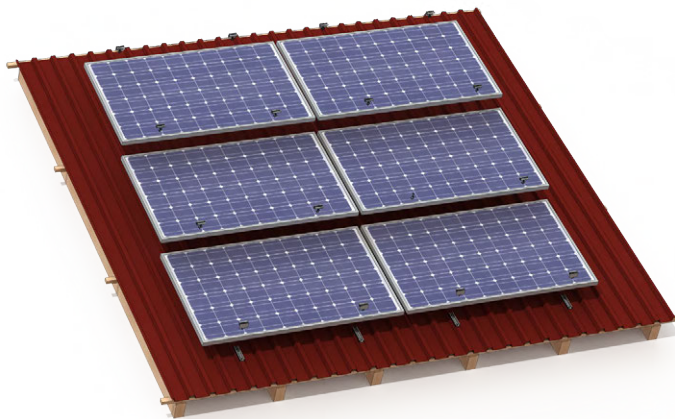
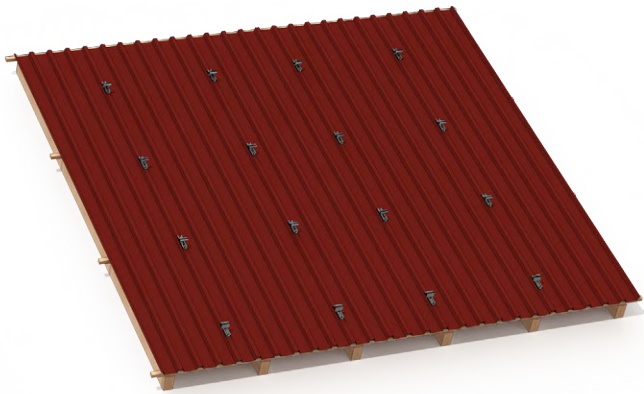
We will be happy to provide you with structural analyses. Please complete the corresponding checklist, which you will find at the end of the document.





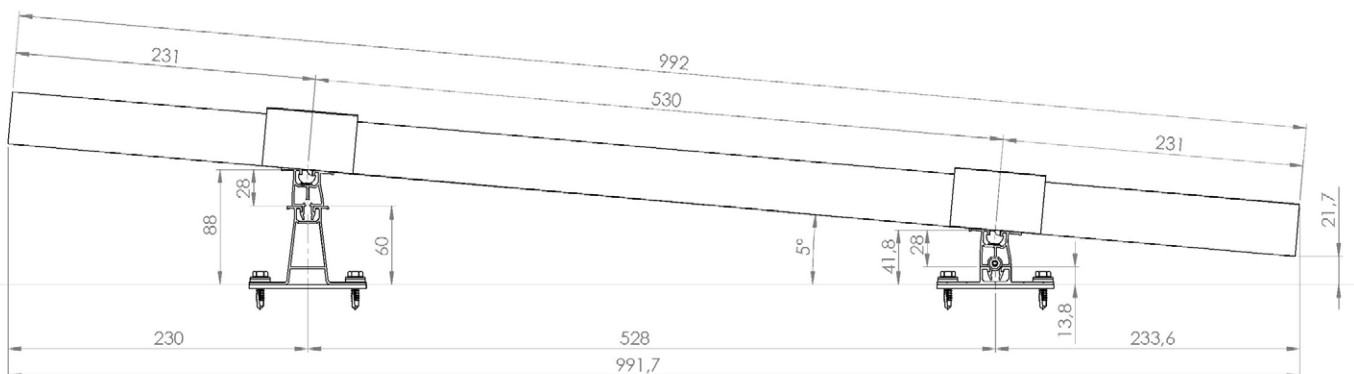
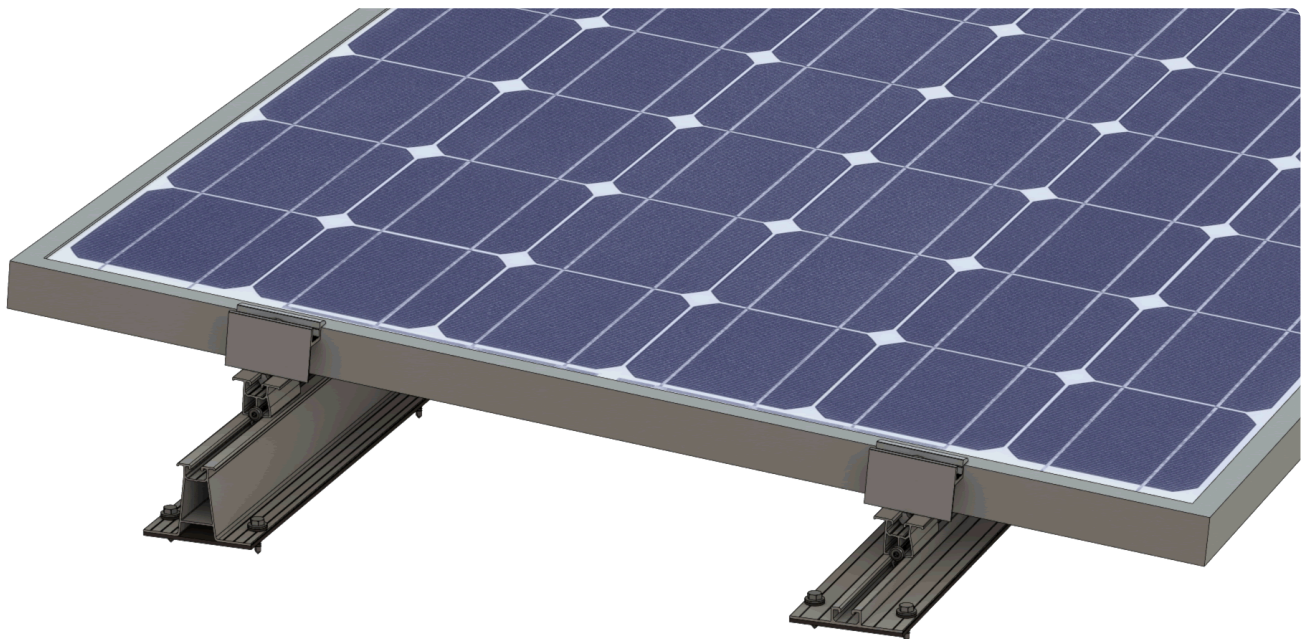
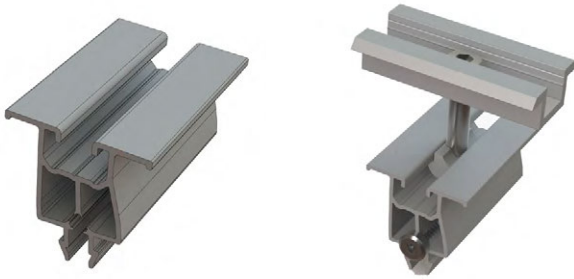
PREDRILLED HIGH BEADING RAIL „DREHFIX“

The assembly sequence is the same as the previous high beading rail. Each rail piece is screwed to the high bead with 2 self-drilling screws. The Drehfix rail is already pre-drilled. The module clamps are screwed in, not clicked in.



TRAPEZOIDAL SHEET METAL MOUNTING WITH 5° ADDITIONAL INCLINATION

- Combination of flat and high trapezoidal rail
- Can be clicked into the groove channel, tightened with the supplied self-tapping screw
- Significantly more favourable generation of an additional angle compared to conventional elevation triangles
- For transverse modules, clamping on the short frame side
- angle 5°
- Module clamp distance ~53cm (centre-centre)



CHECKLIST FOR TRAPEZOIDAL METAL SHEET ROOFS

customer address		project location (if different location)	
name	<input type="text"/>	name	<input type="text"/>
street	<input type="text"/>	street	<input type="text"/>
city	<input type="text"/>	city	<input type="text"/>
phone	<input type="text"/>	phone	<input type="text"/>

building / location data			
roof pitch degree	height of roof m	building width (pediment) m	building length m
terrain height m	wind load kN/m ²	snow load kN/m ²	
near to an embankment?			
height of embankment m	length of embankment m	distance to the building m	

solar panel data				
quantity	<input type="text"/>	panel orientation <input type="text"/>		
length mm	<input type="text"/>	width mm	<input type="text"/>	height mm <input type="text"/>
				weight kg <input type="text"/>

trapezoidal metal sheet			
material		additional comments:	
thickness mm			
distance between the beads mm		width of upper bead mm	screw

sketch

Please sketch the planned array layout in the following grid or send us an layout plan!

CONTACT

Michael Schreiber

Managing Director

Tel.: +49 (0)208 - 30 96 19 - 0

Mail: m.schreiber@profiness.de

Ulrich Kamp

Sales

Tel.: +49 (0)208 - 30 96 19 - 01

Mail: u.kamp@profiness.de

Gabriele Zsori

Sales

Tel.: +49 (0)208 - 30 96 19 - 02

Mail: g.zsori@profiness.de

Jan Matten

Sales

Tel.: +49 (0)208 - 30 96 19 - 03

Mail: j.matten@profiness.de

Björn ter Schüren

Sales

Tel.: +49 (0)208 - 30 96 19 - 04

Mail: b.terschueren@profiness.de

Sabine Plott

Sales

Tel.: +49 (0)208 - 30 96 19 - 05

Mail: s.plott@profiness.de



PROFINESS GmbH

Broicher Waldweg 42
45478 Mülheim a.d. Ruhr

info@profiness.de (24h)
www.profiness.de

Tel.: +49 (0)208 - 30 96 19 - 0
Fax: +49 (0)208 - 30 96 19 - 09
