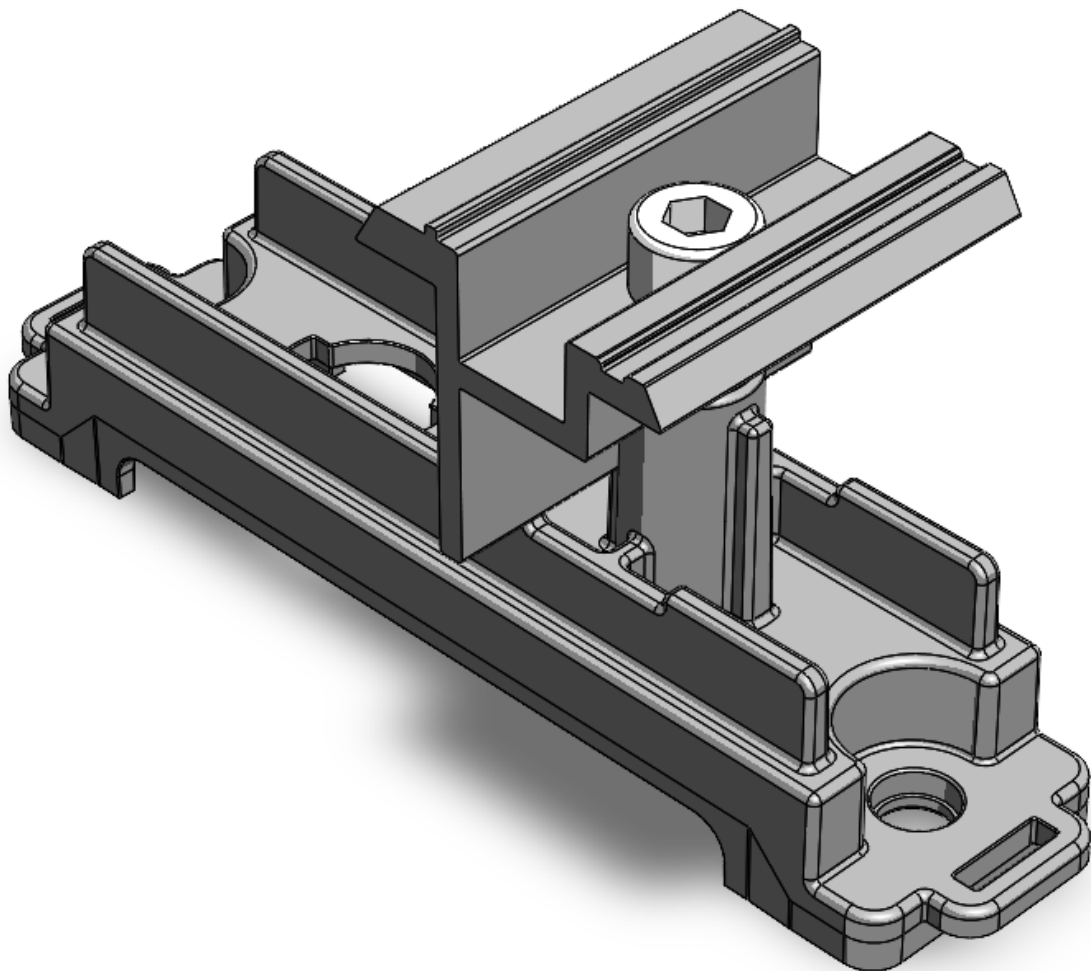


Mounting instructions

TrapFIX



1. General safety instructions

Intended use: The TrapFIX system is intended exclusively for the mounting of PV modules in landscape orientation on metal roofs made of trapezoidal sheet metal. Any other use of the TrapFIX system is not considered as intended use. Approval from the module manufacturer is always required for the use of the TrapFIX system.

Mounting instructions: The specifications in the mounting instructions for the TrapFIX system must be strictly complied with. Always use the latest version of the mounting instructions, which are available on the website (www.eco-invention.ch) or on request by email (trapfix@eco-invention.ch). A copy of the mounting instructions must always be available during mounting. The module manufacturer's mounting instructions must also be complied with.

Personnel requirements: The mounting work may only be carried out by qualified and competent persons who can ensure that the work is carried out in accordance with the applicable regulations. The specifications in the mounting instructions, the project report, the planning documents and other project specifications must be strictly complied with. Mounting must be carried out by at least two persons to ensure that rapid assistance can be provided in case of an accident.

Occupational safety: All relevant occupational health and safety regulations (e.g. accident prevention regulations, occupational health and safety regulations, standards, construction regulations, environmental protection regulations, regulations of employers' liability insurance associations etc.) must be complied with. In particular, personal protective equipment must be worn during mounting in accordance with the relevant regulations (e.g. safety helmet, safety shoes, gloves etc.) and fall protection and/or safety gear must be installed in accordance with the relevant regulations. Mounting work must not be carried out or continued in poor weather conditions, wet conditions, sub-zero temperatures or windy conditions.

Static requirements: The static requirements of the project must be checked before mounting, in particular the load-bearing capacity of the building. Weak points (e.g. roof windows, skylights, ventilation flaps etc.) must be secured in a similar way as the edge of the roof. If the roof structure is not sufficiently load-bearing, load distribution aids must be used.

Environmental protection: The local and national construction regulations, standards and provisions relating to environmental protection must be complied with.

2. Important mounting and maintenance instructions

Requirements for the trapezoidal sheet metal roof: TrapFIX may only be used for mounting of modules in landscape orientation on trapezoidal sheet metal roofs. The trapezoidal sheet metal roof must be checked for tightness, rust, delamination and other weak points or on-site problems before mounting. The trapezoidal sheet metal roof must in any case have a minimum metal strength of 0.5 mm (sheet steel) and 0.7 mm (sheet aluminium).

Requirements for thin sheet metal screws: The TrapFIX system must be attached to the trapezoidal sheet metal roof using stainless thin sheet metal screws. The minimum length of the thin sheet metal screws is 25 mm. The diameter must be 5.5 or 6 mm. The thin sheet metal screw must be fitted with a sealing washer with a diameter of 16 mm. The instructions of the screw manufacturer must also be observed. The use of EJOFAST JF3-2-5.5x25 or JF3-2-6.0x25 from EJOT or the RP-T2 thin sheet metal screw 6.0x25 from Reisser is recommended.

Use of a mounting jig: A suitable mounting jig from the supplier must be used to mount the TrapFIX system. The correct use of such a mounting jig ensures that the required distances and tolerances are maintained. Otherwise, static problems, unfavorable force effects or unstable attachments may occur.

Requirements for the PV modules: The frame height of the PV modules must be between 30 - 40 mm. The PV modules may have a maximum width of 1.34 m. The module manufacturer must have approved its PV modules for use with the TrapFIX system and its instructions must be observed. The PV modules must be capable of withstanding the wind/snow loads at the project location. The clamping zones of the PV modules must be strictly adhered to. The clamping zones must be checked manually and are not taken into consideration by the planning software.

Project planning: The TrapFIX system must be designed using the Solar.Pro.Tool software from Levasoft (<https://spt.solar/>). The design can be created by us, one of our sales partners or the customer himself. The software only takes into consideration the statics of the mounting system and not those of the building or other effects (e.g. snow guard, clamping zones etc.). **The customer must check the correctness of the system planning on site.** The information in the project report and other planning documents - in particular the minimum number of TrapFIX elements to be used - must be strictly adhered to.

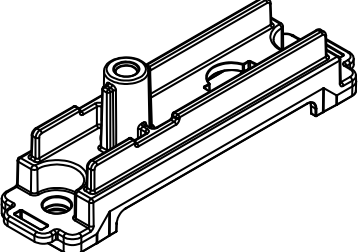
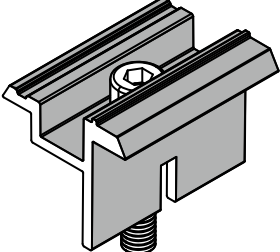
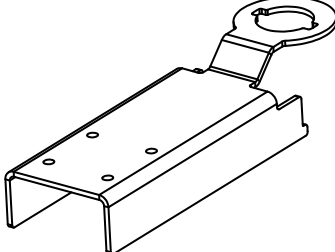
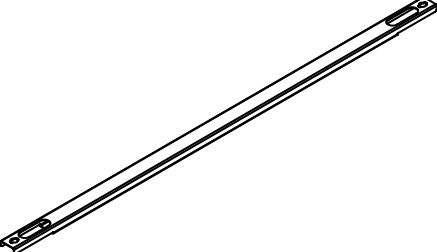
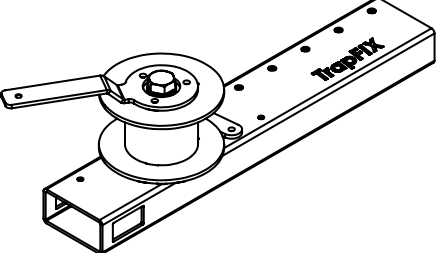
Maintenance instructions: An annual inspection of the mounting system (incl. connections) must be carried out. In particular, the mounting system must be checked for function, corrosion, strength of the connections and stability. An inspection of the system is also mandatory after every storm (e.g. storm or gale-force winds). The maintenance work must be carried out by an experienced specialist company. In particular, we recommend a visual inspection of the components and a random check of the connections and the secure and correct position of the individual elements. If the system is impaired, the affected **component must be repaired or replaced immediately. Any defects must be reported to the manufacturer immediately.**

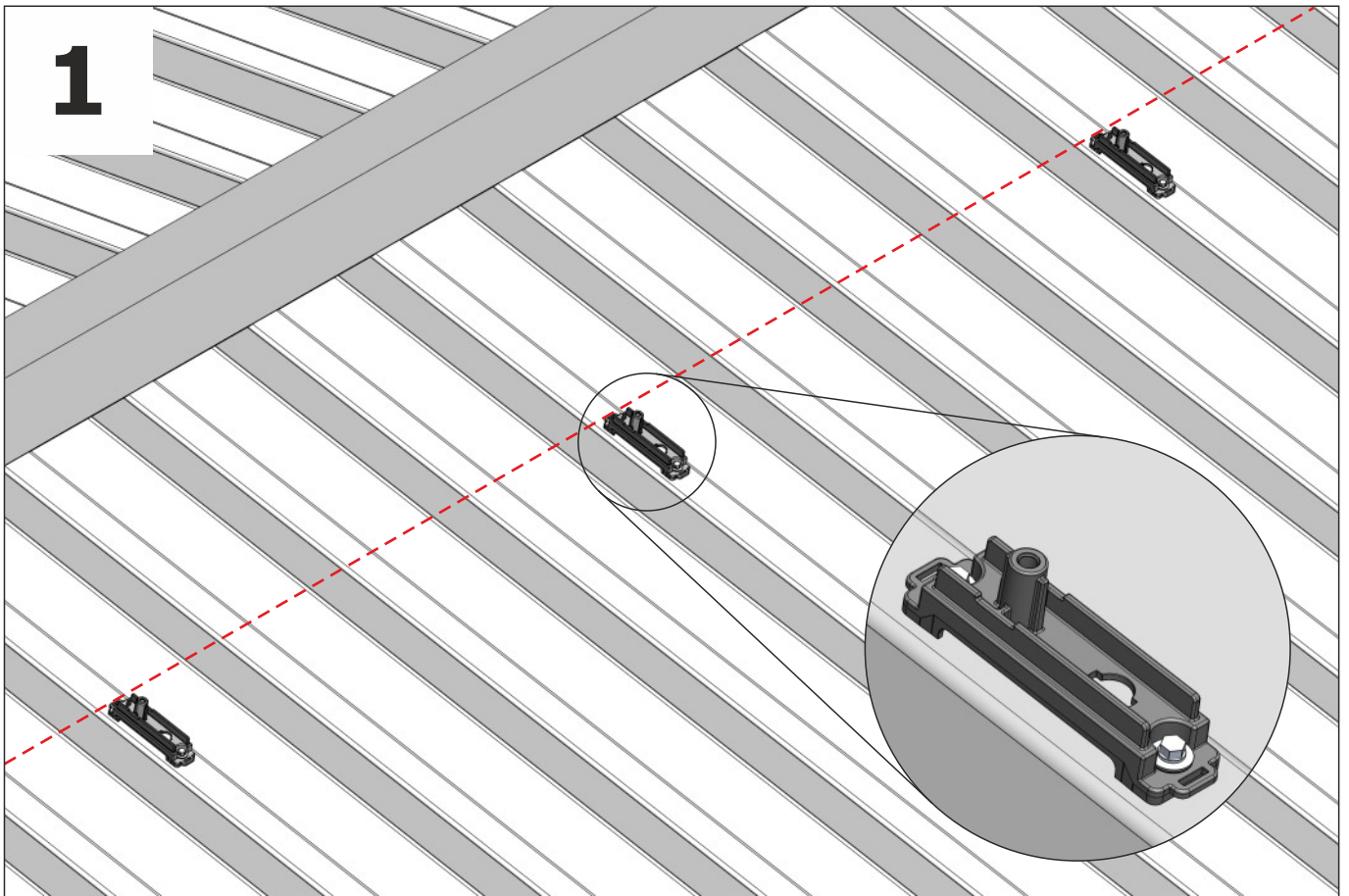
Disassembly and disposal: To disassemble the system, carry out the assembly steps in reverse order. Dispose of the components properly for recycling.

Article overview

Thin sheet screw for roof connection

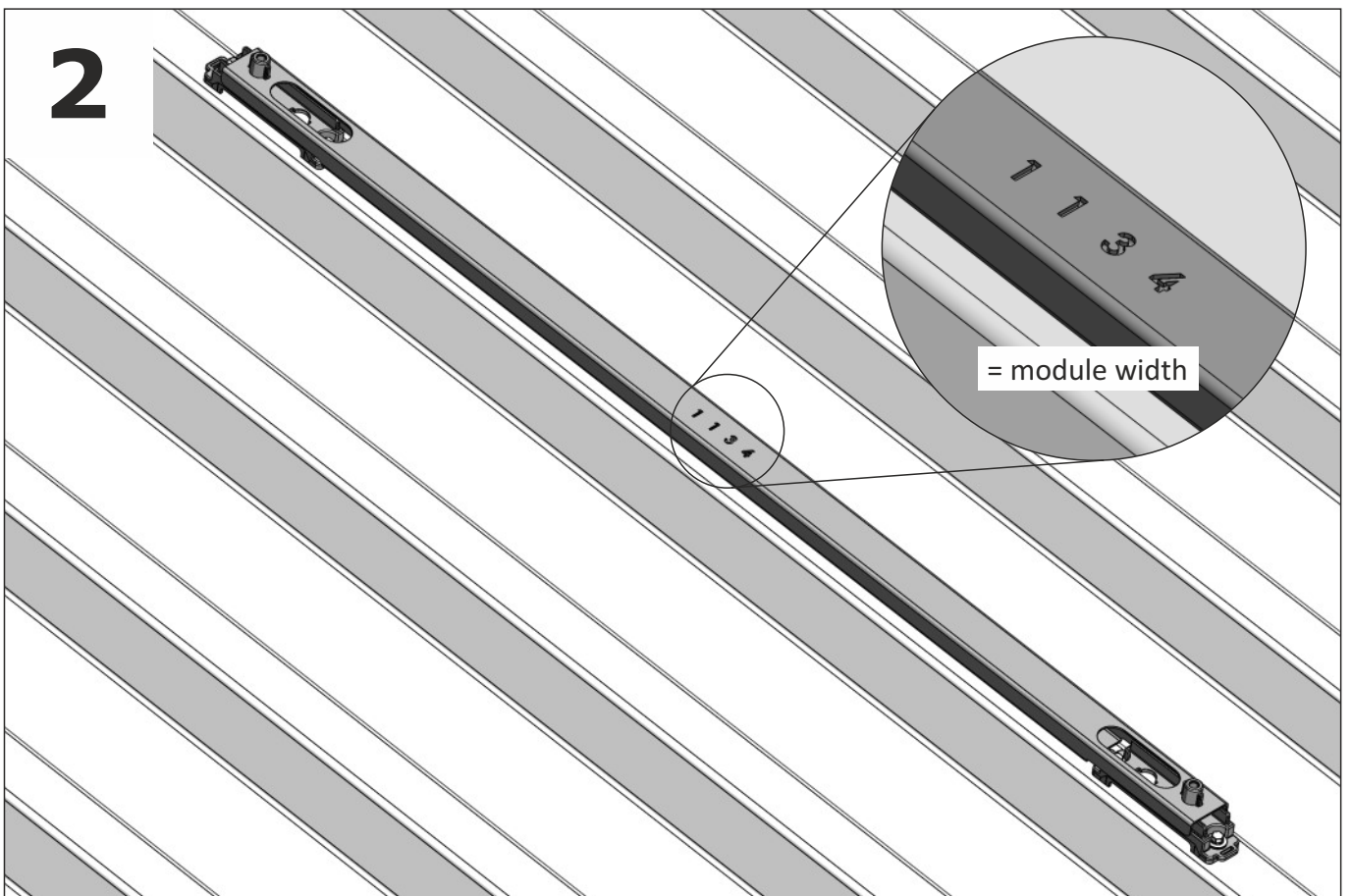
The thin sheet metal screw including sealing washer is selected by the fitter. The screw must have a minimum length of 25 mm, be stainless and have a sealing washer (Ø 16 mm). We recommend using the EJOFAST JF3-2-5.5x25 or JF3-2-6.0x25 from EJOT or the RP-T2 thin sheet metal screw 6.0x25 from Reisser.

	Article Nr.	Description
	1.01	TrapFIX - Base PU 50 pcs.
	1.02	TrapFIX - Universal clamp PU 50 pcs. black For module heights 30-40 mm
	1.03	Optimiser holder (optional) PU 100 pcs.
	2.01-2.09	Assembly gauges Adapted to module widths PU 1 pcs.
	3.01	Rope tensioner (optional) PU 1 pcs.



1

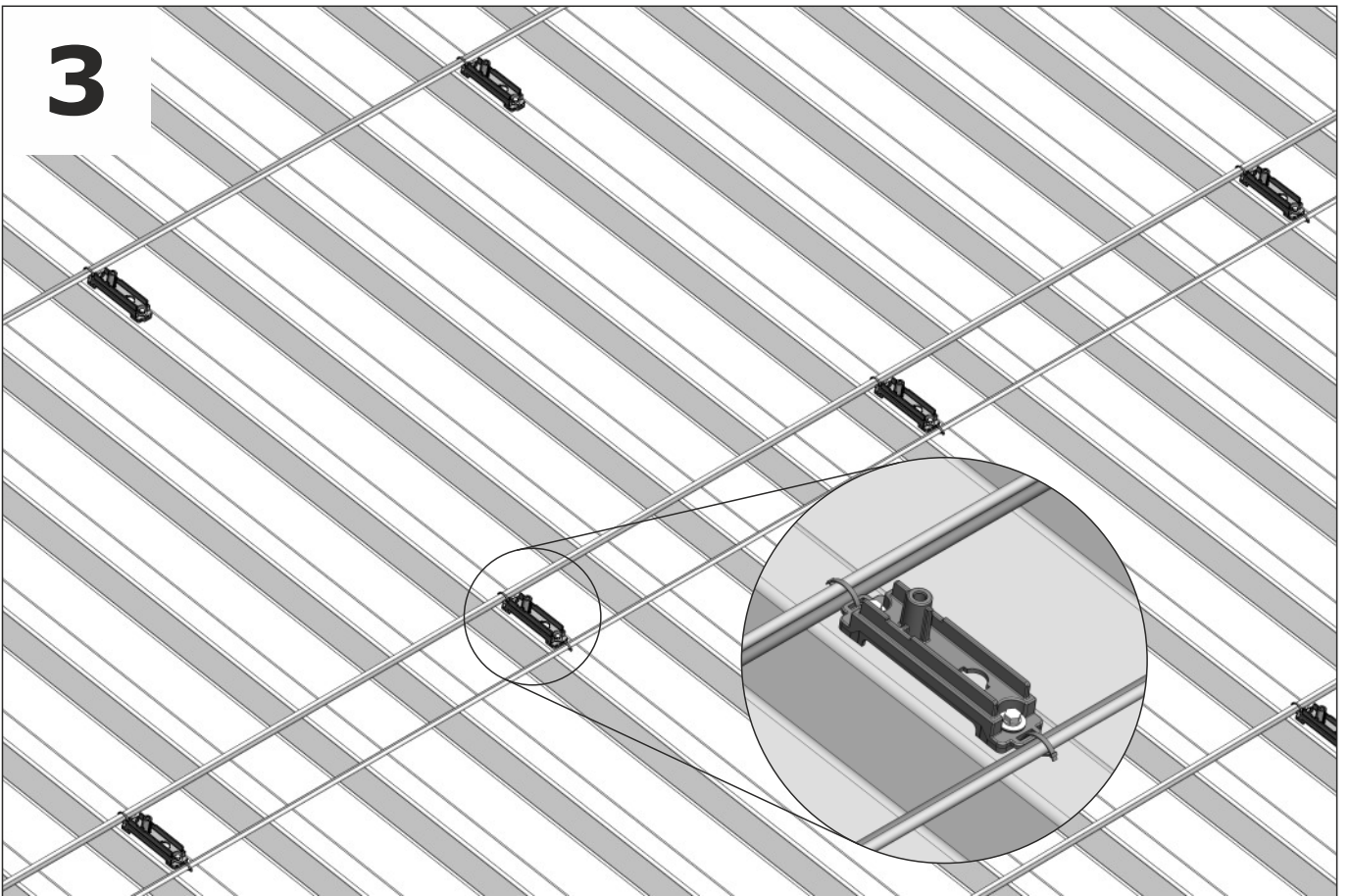
Mount the TrapFIX on the lower or upper roof edge in a straight row using suitable thin sheet metal screws of your choice. The long side of the TrapFIX should lie under the modules.



2

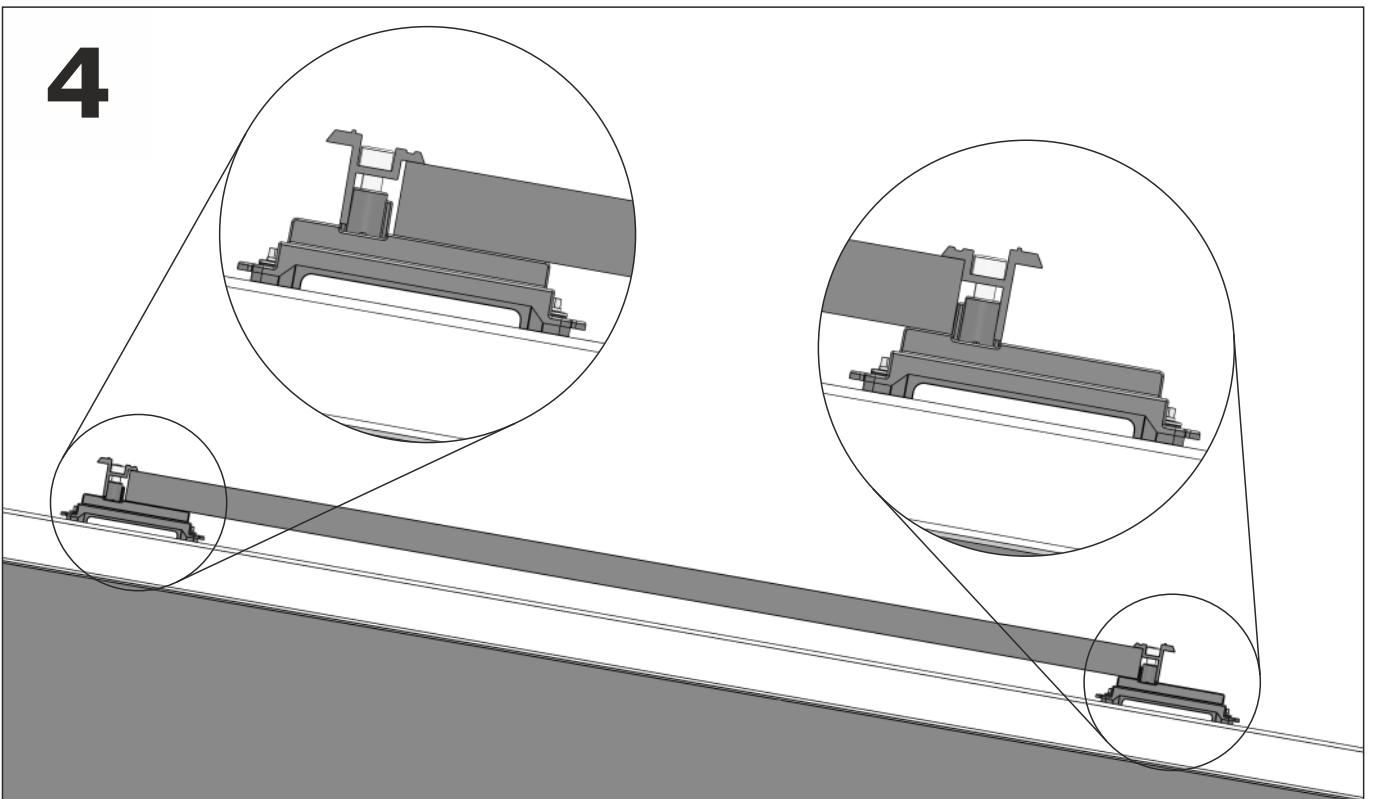
Fit the TrapFIX of the next row with a gauge adapted to the module width. The long side of the TrapFIX towards the roof eaves. Repeat the process a maximum of 10 times or until the end of the field. The TrapFIX may only be installed with a gauge.

3



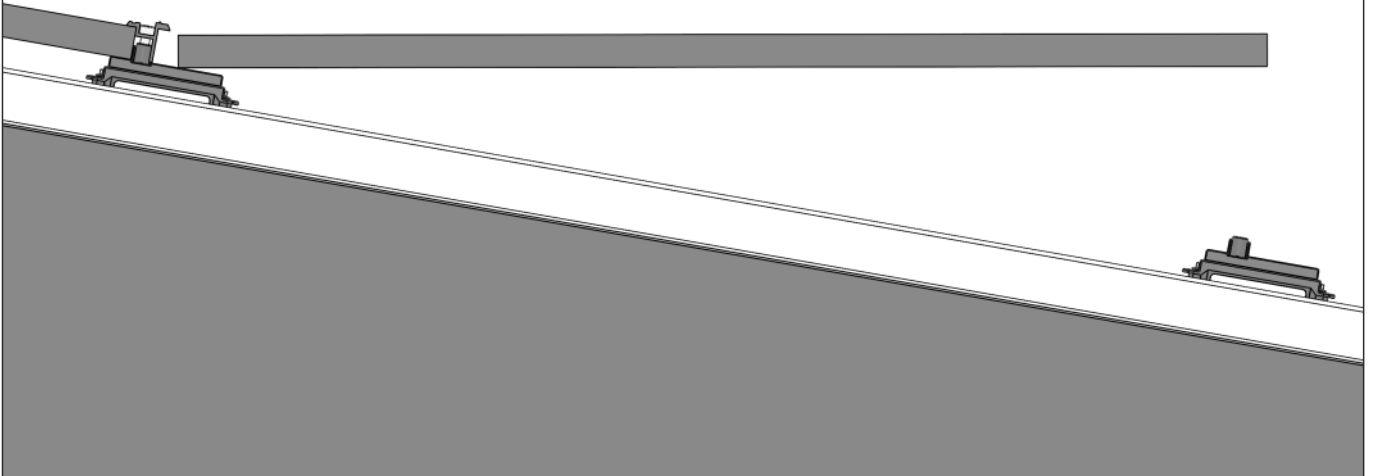
Lay the string cable and attach it to the lugs provided on the TrapFIX.

4



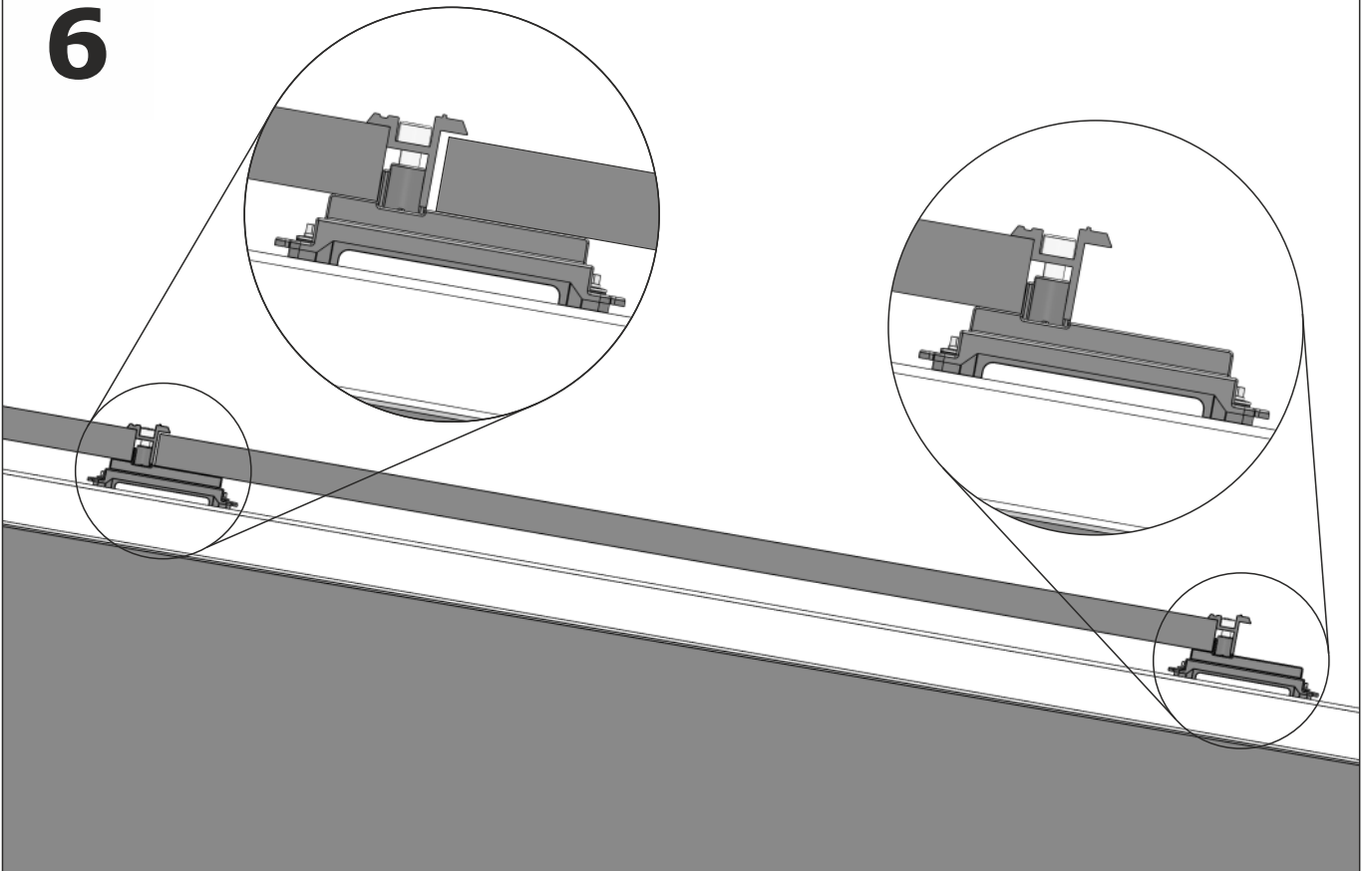
We recommend installing the modules from the ridge towards the eaves. The top module is inserted between the top two TrapFIX modules and clamped on two sides. The screw should be tightened with 16 Nm.

5



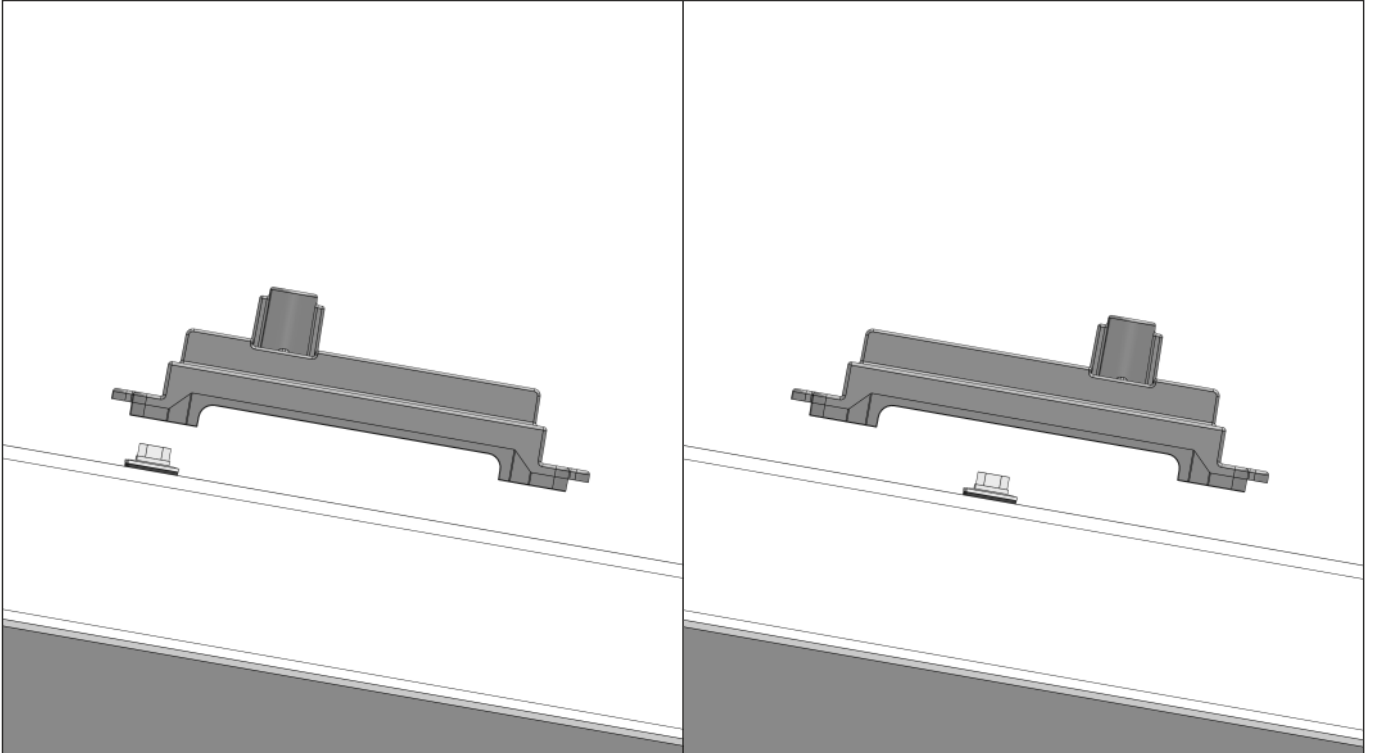
Slide the next module under the insertion clamp...

6



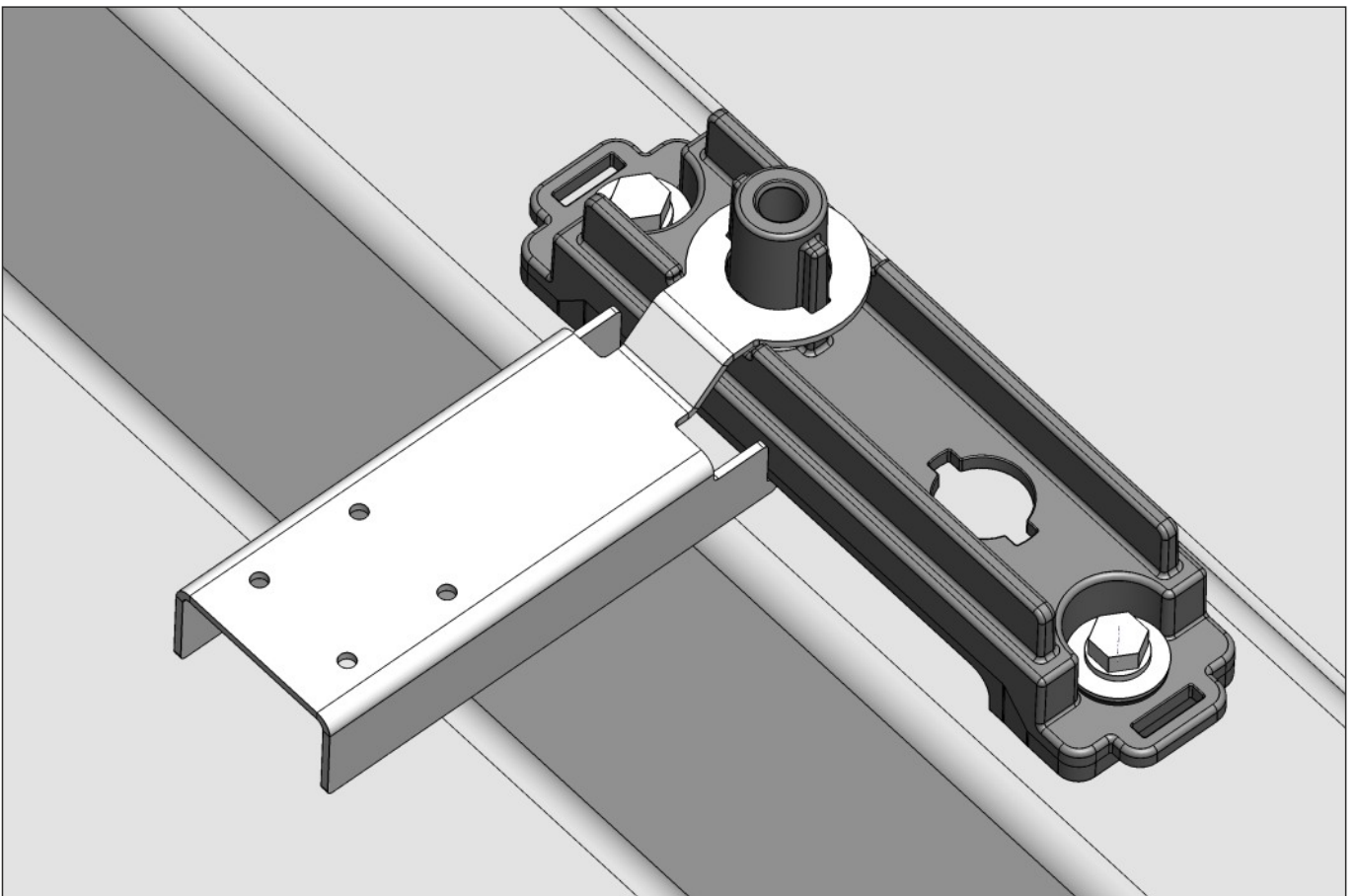
...and clamp at the lower edge. Repeat the process until the end of the field.

Tips, tricks and assembly aids



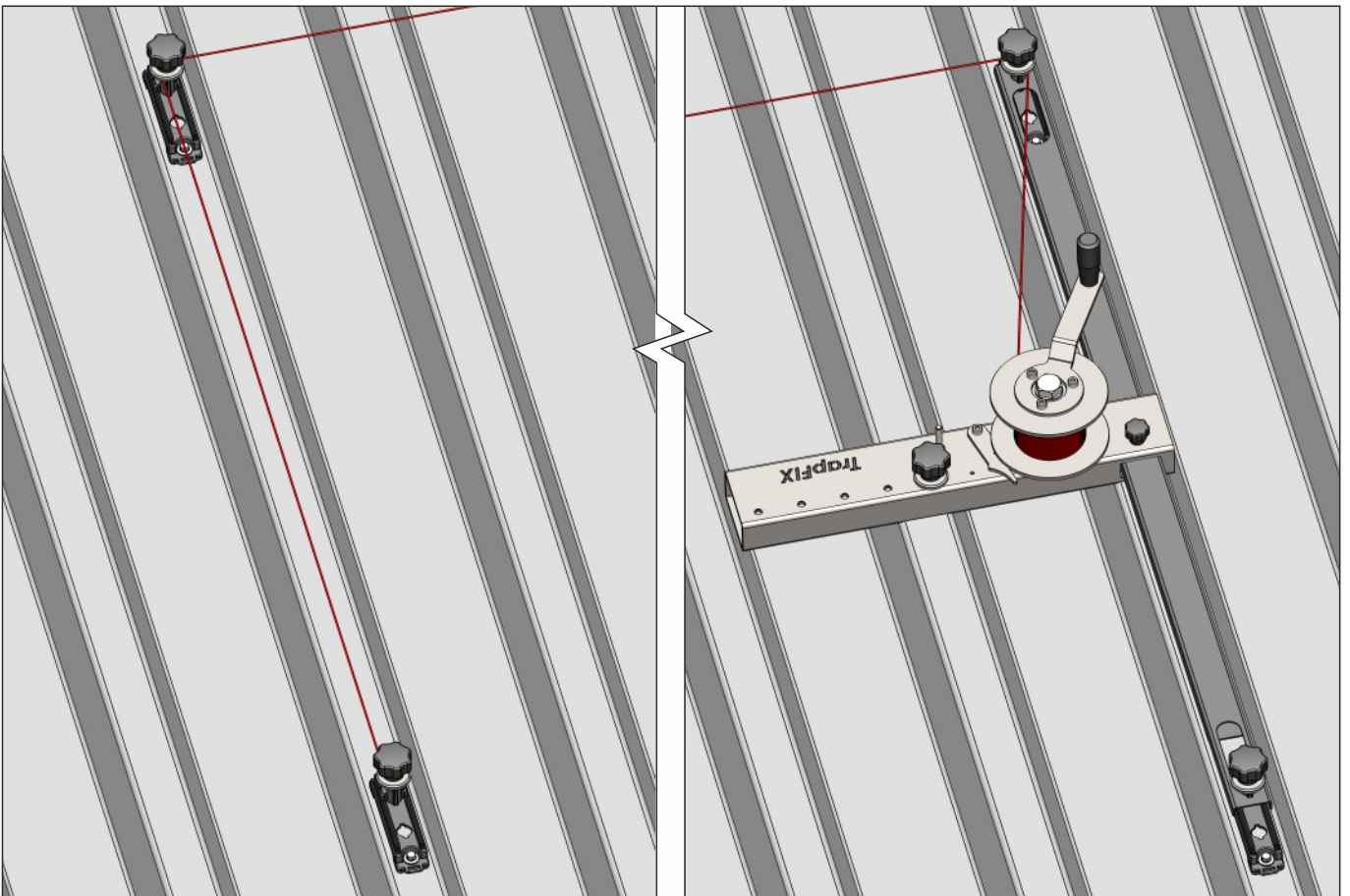
Bypass roof mounting screws

If the foot of a TrapFIX panel accidentally strikes an existing roof mounting screw, simply rotate the TrapFIX panel 180°. Large calottes may have to be removed.



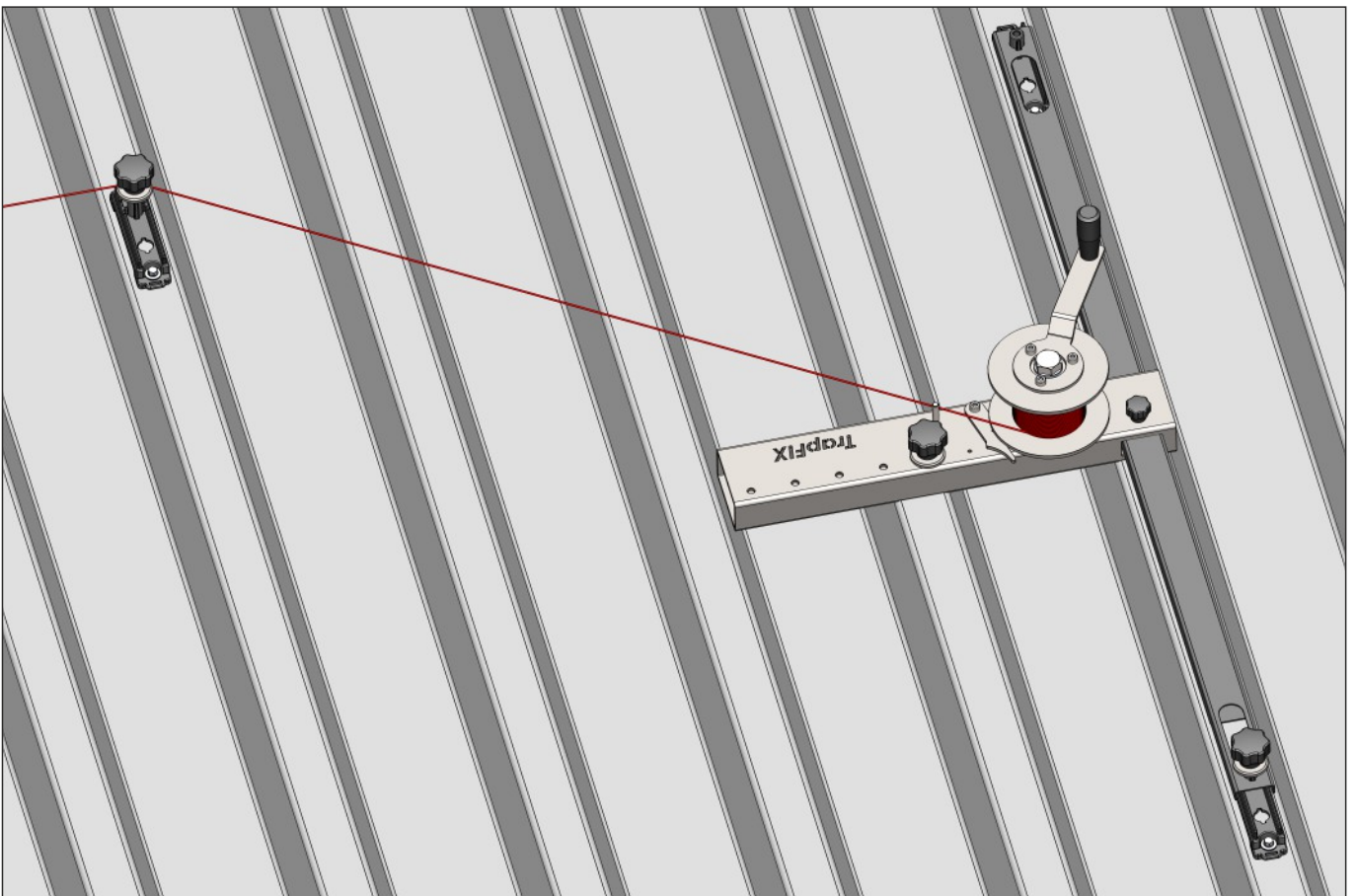
Holder for microinverter / optimiser

Optimisers and microinverters can be attached to the TrapFIX neatly, securely and quickly using an additional aluminium bracket.



Rope tensioner

We recommend using our cable tensioner for precise positioning of the 1st row of TrapFIX. To do this mount the outermost TrapFIX, attach the cable tensioner to the gauge and tension the cable.



Next, place the 2nd TrapFIX on both sides with the rope as a stop and tension the rope as shown in the picture. Then tighten the rope further and use it as a stop for the top row of TrapFIX.

Caution Do not shift the rope when placing the TrapFIX.