Roof Tiles
Manual

blubase™
STRONG IN SOLAR SUPPORT

V0125

! ALWAYS OBSERVE THE OCCUPATIONAL SAFETY REGULATIONS

1. Check whether the roof base is sufficiently strong(replace if necessary)
2. Always adhere to the NEN standards
3. Clean the roof thoroughly before laying and measure any obstacles and interruptions.
   Always start your installation from north to south.

Clean the roof thoroughly before laying and measure any obstacles and interruptions. Then you can start. Always start your installation from an upper corner and work your way to the side and down to place the panels perpendicular to the roof. And of course, take all safety measures.

BEFORE YOU START

With the installation of a PV system, the building load changes. This can affect the supporting structure. That is why it is important to have that load recalculated by a qualified technician. Please pay attention to the current regulations, in particular NEN6702, NEN7250, NEN1991-1-4 A1 + C2/NB & NEN1991-1-1-3.

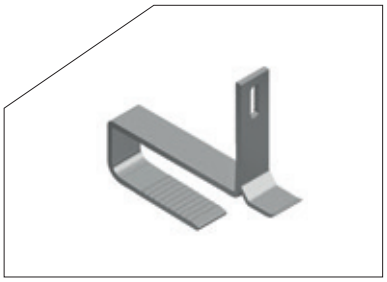
Also request approval from the insurer and the manufacturer for:

- the loads on the building due to the extra weight of the PV system.
- the loads on the building due to the changed geometry of the roof surface.
- the loads on the building due to the dynamic wind pressure and precipitation.
- the loads during installation on the building, the roof covering and the insulation.
- the load of the contact points on the compatibility of the insulation and roofing.
- the compatibility of the roof covering with the supporting structure at the contact points.
- the consequences of the thermal effect of the building and the PV system on each other.
- the consequences of any movement of the roof and the PV system.

The calculations and dimensions in the Blubase calculator have been carefully made, but you cannot derive any rights from them. The prices give an impression. These may therefore deviate, for example due to rising raw material prices. You can find the general terms and conditions of delivery at **blubase.com.**

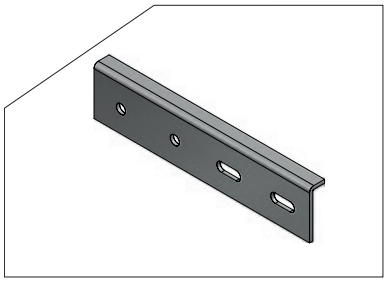
Scan the QR-code
for more information!

THE COMPONENTS



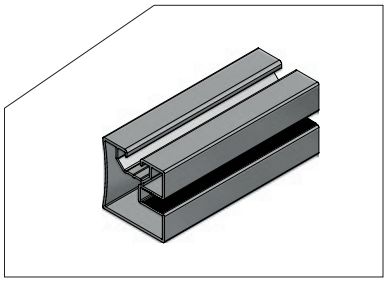
Roof hook
Article no.

200135 / 200145 / 200200



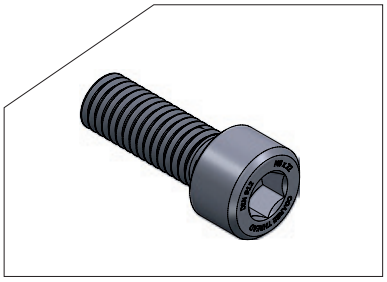
Connecting strip
Article no.

220071



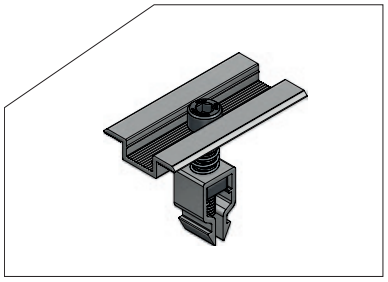
Mounting rail
Article no.

220000



Bolt M8x20
Article no.

900200

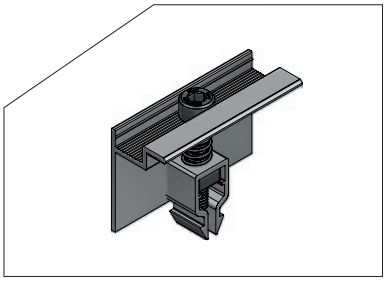


Easy clamp middle
Article no. Aluminium (blank)

852630 / 853134 / 853540 / 854145 / 854650

Article no. Black

872630 / 873134 / 873540 / 874145 / 874650

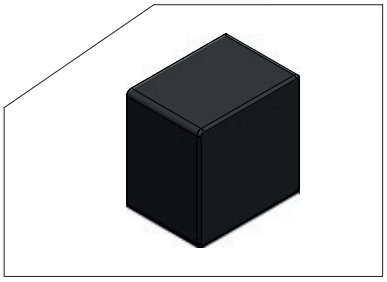


Easy clamp end
Article no. Aluminium (blank)

860032 / 860035 / 860040 / 860045 / 860050

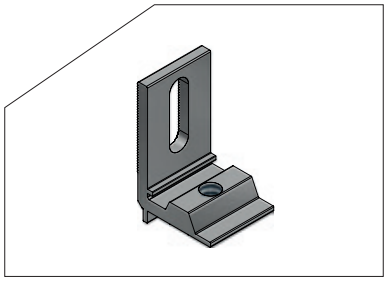
Article no. Black

860132 / 860135 / 860140 / 860145 / 860150



Eind cap
Article no.

220092

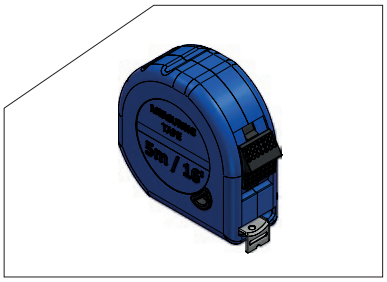


Corner connector
Article no.

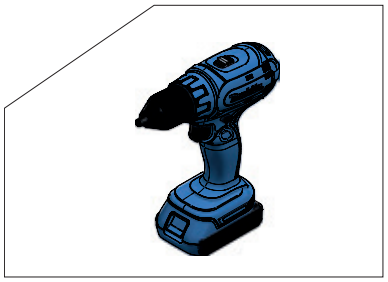
220100

Optional black versions can be found on page **10.**

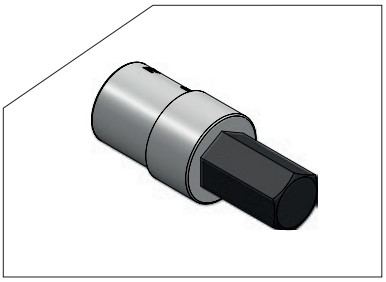
YOUR TOOLS



Measuring equipment



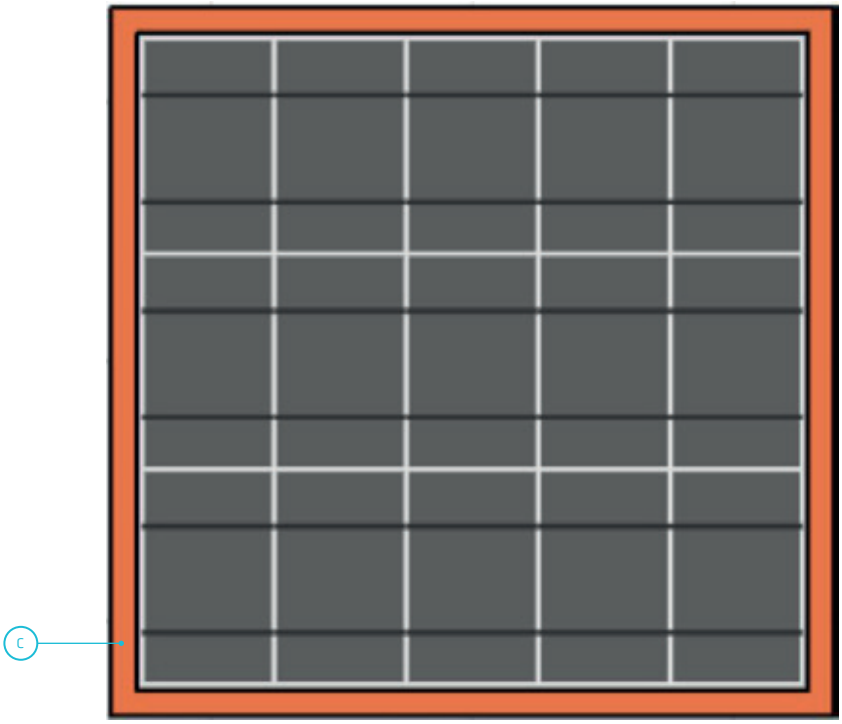
Screwdriver



Hexagon bit 8 mm

PREPARATION

Clean the roof thoroughly before laying and measure any obstacles and interruptions. Then you can start. Always start your installation from an upper corner and work your way to the side and bottom to place the panels perpendicular to the roof. And of course, take all safety measures.



FREE EDGE REGION

The NEN 7250 indicates that you should not install solar panels all the way to the edge of the roof. Turbulent wind flows can occur there. So you have to keep a lane free; the free edge zone.

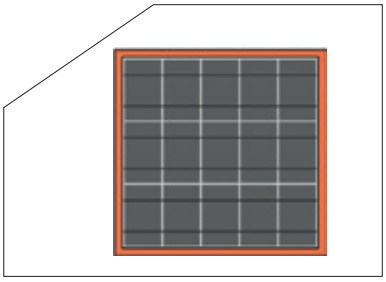
Are you installing solar panels on a roof that is higher than 12 meters? Then it may be necessary to take additional measures.
Ask your Blubase contact person for advice.

Measure the free edge zone from the outer edge (see orange border in image C). When installing on tiled roofs, you must always remain at least 20 cm from the edges and the gutter and ridge.

GETTING STARTED - LAYING PANELS (PORTRAIT)

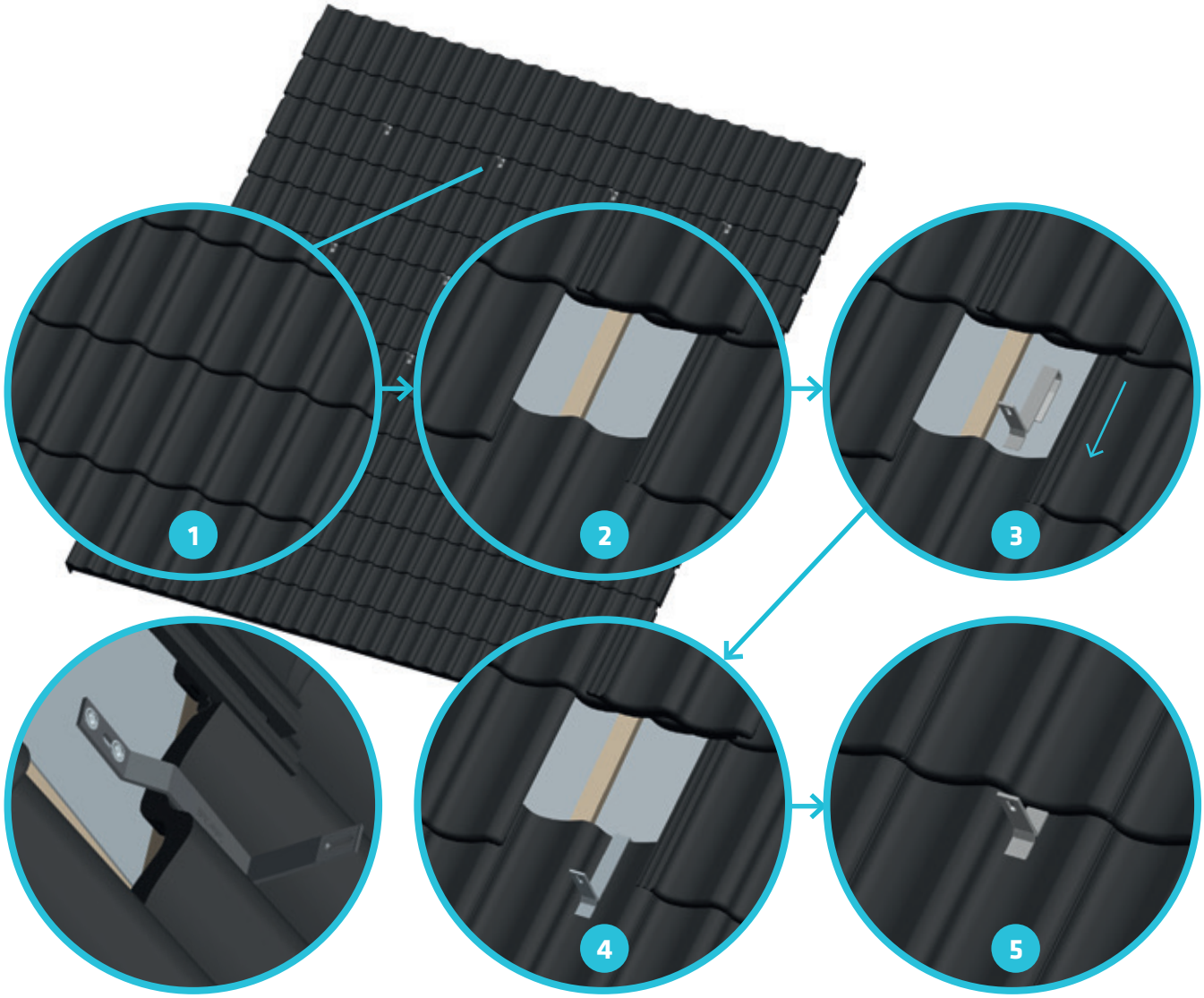
STEP 1: MOUNTING PLAN

You work based on a plan from the Blubase calculator (calculatie.blubase.com). Determine the first attachment point within the free edge zone (see page 5) and work from there from top to bottom and to the side.



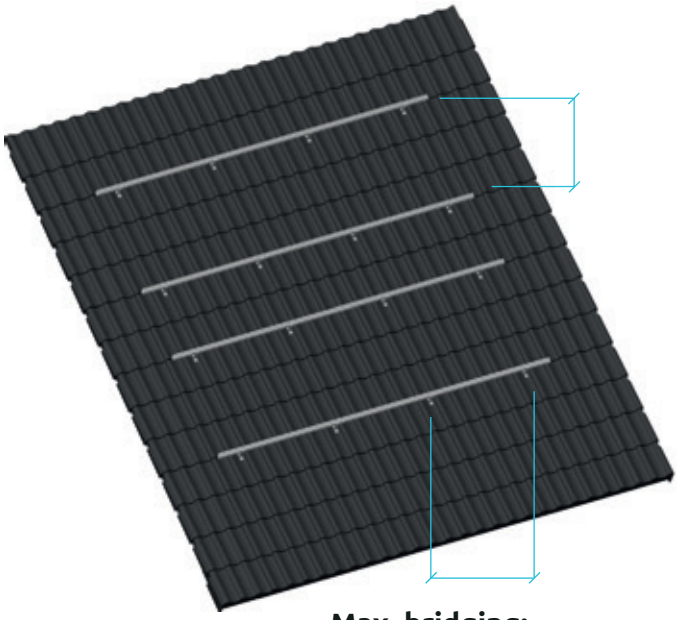
STEP 2: FIRST LAYING POINT

Determine your first attachment point. Slide the roof tile up directly above it and place a roof hook over the roof tile and the batten below it. Then slide the parent pan back into place. Then continue to the next point. Maintain a distance of maximum 1000mm.

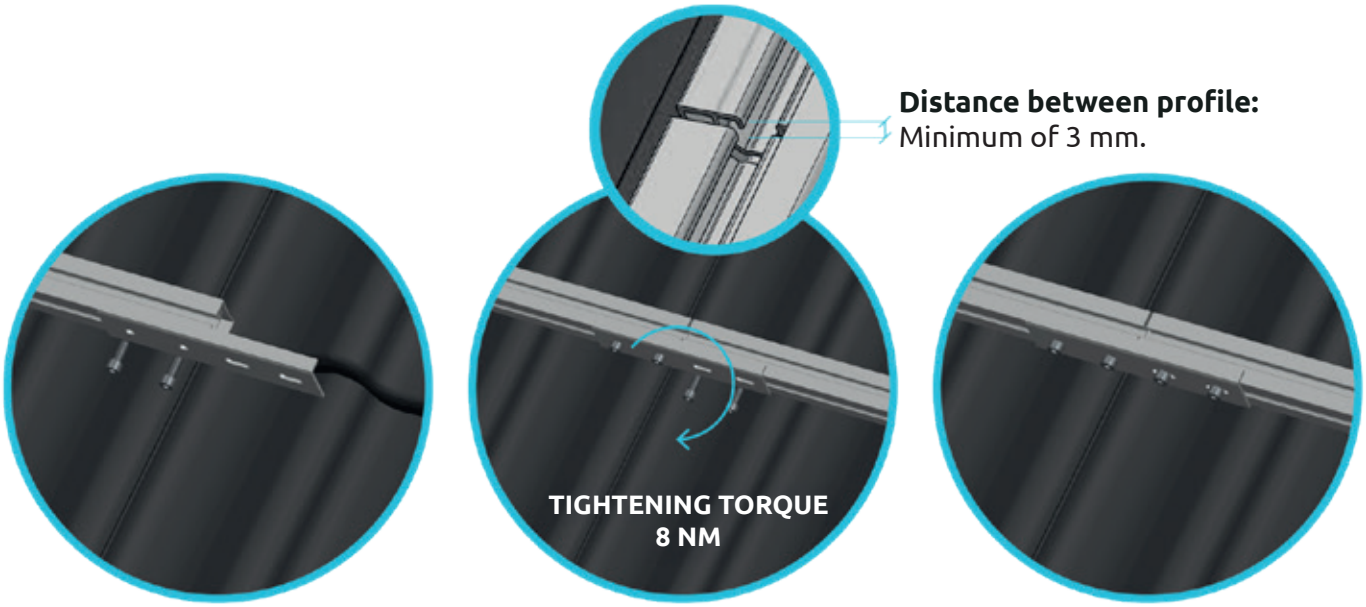


STEP 3: HORIZONTAL MOUNTING RAIL

Have you attached all roof hooks? Then place the mounting rails on the roof hooks and attach them with the M8x20mm bolts. You can align the height with the slot in the roof hook.
Do you want to extend a rail? Then use the connecting strip and secure it with the M8x20mm bolts. Keep at least 3mm space between the rails for the metal to work.



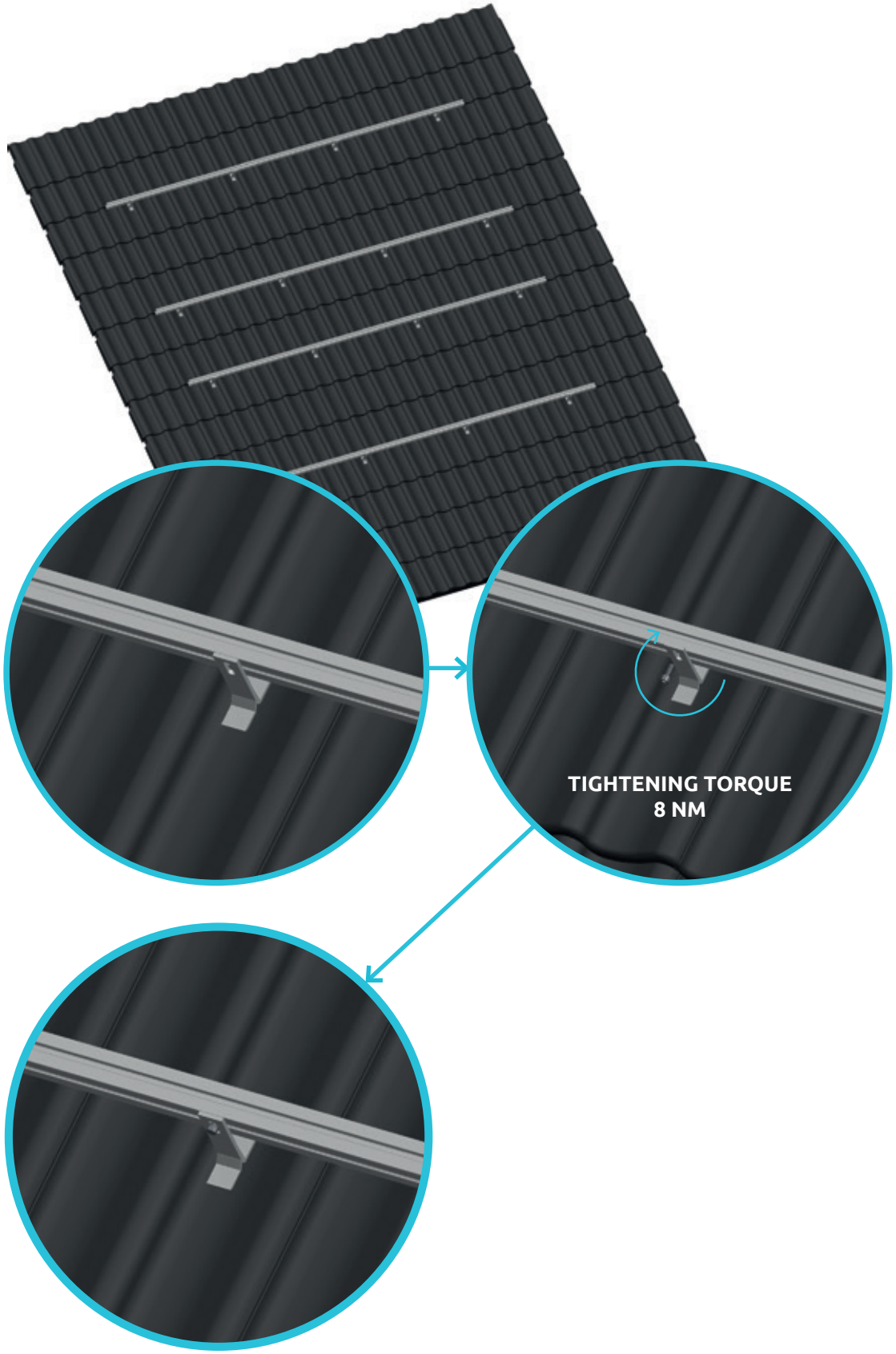
Max. bridging:
Rail 40x40: 1000 mm



Distance between profile:
Minimum of 3 mm.

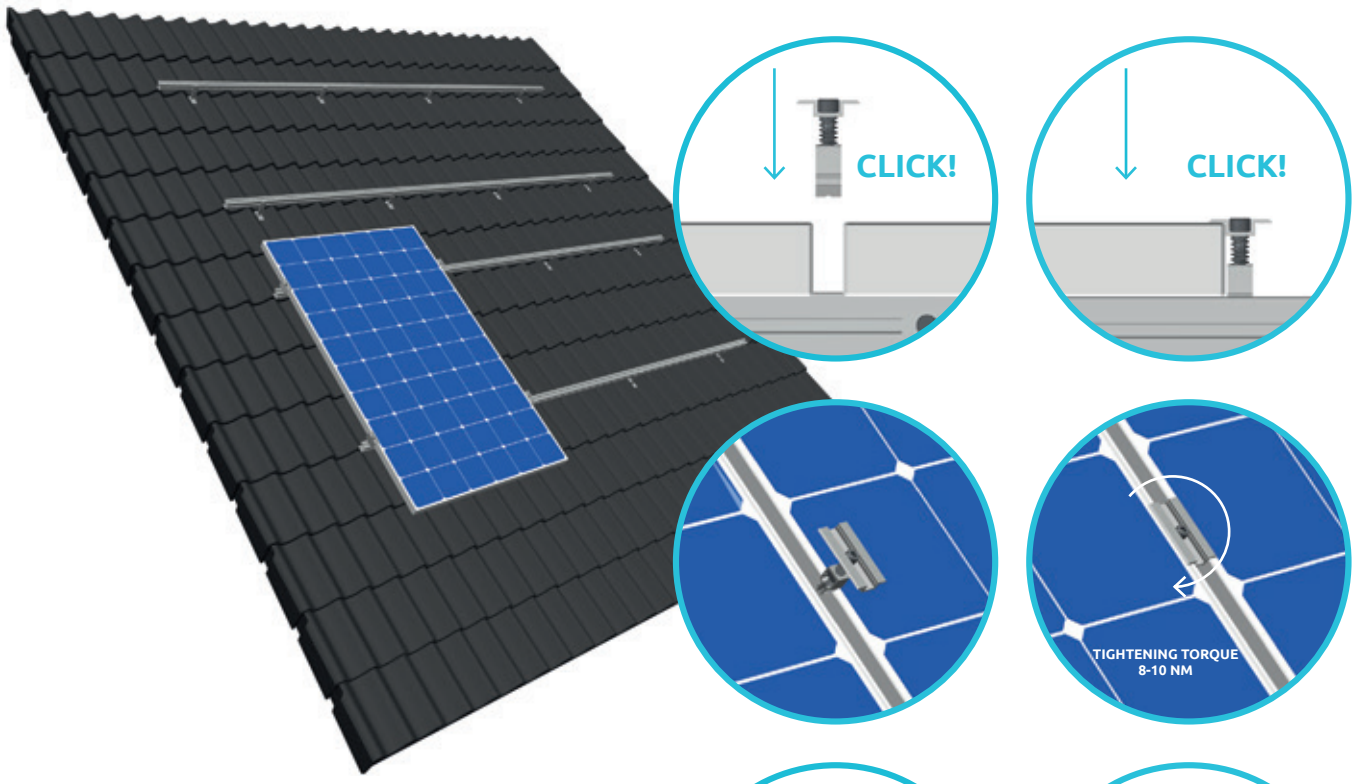
The mounting rail may extend a maximum of 250 mm.

STEP 3B: ATTACHING THE RAILS



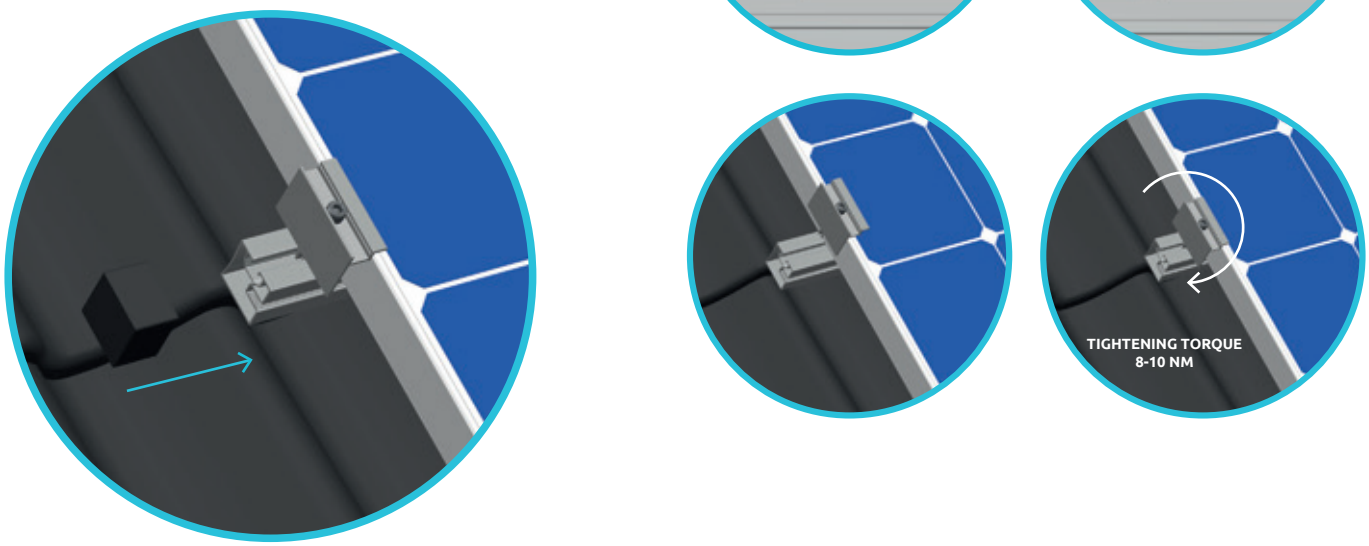
STEP 4: LAYING THE PANELS

Insert the side clamps into the mounting rail and rest the solar panels on them. Use center clamps between the panels. Tighten the bolt in the clamps (torque 8-10 Nm).



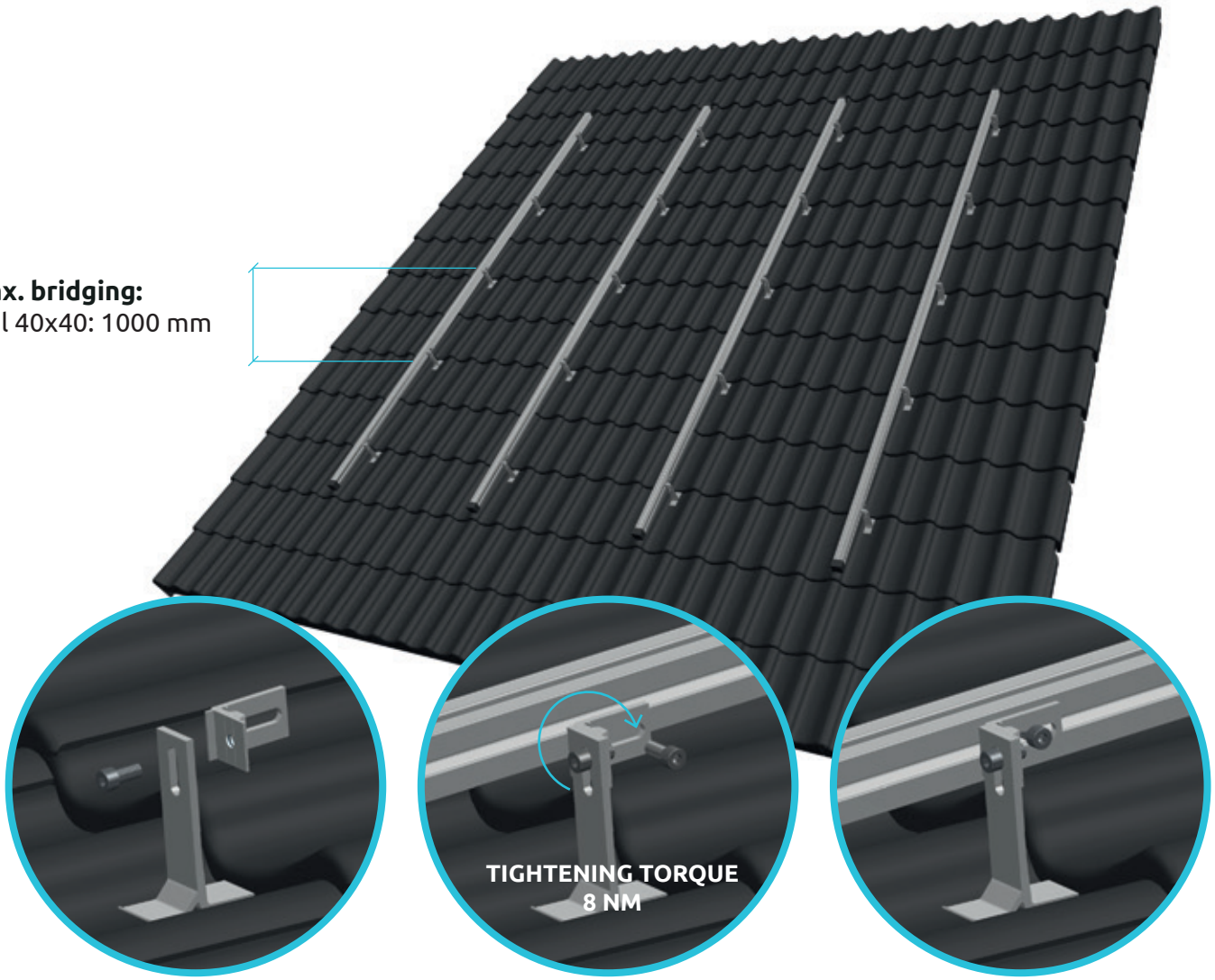
STEP 5: END CAPS

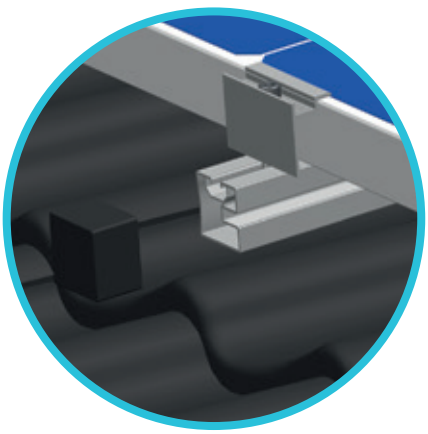
Are you using end caps on the system?
Place these at the end of the rails.



LAYING OF PANELS IN LANDSCAPE

Max. bridging:
Rail 40x40: 1000 mm

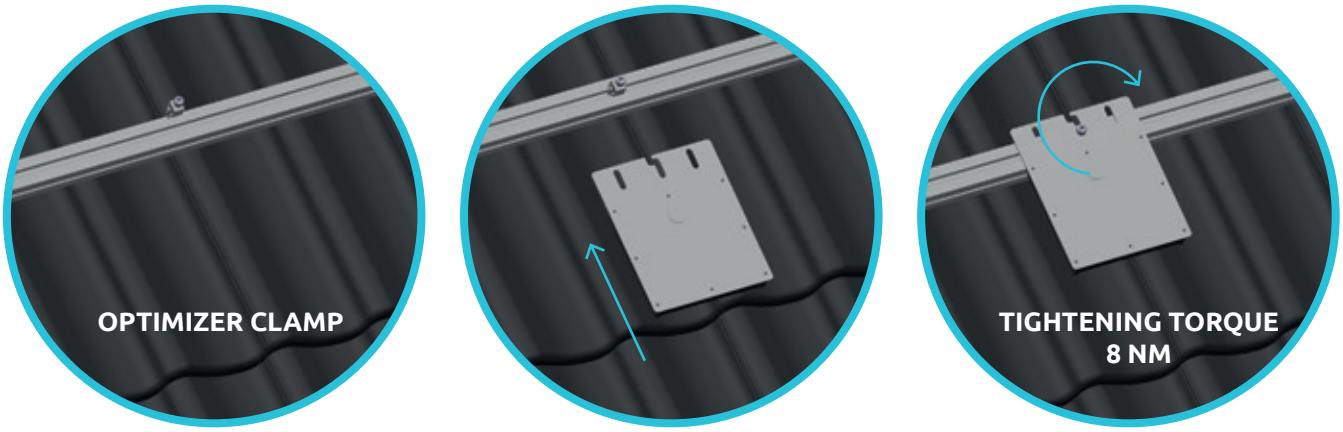




USING END CAPS?
Slide them around the ends of the mounting rails.

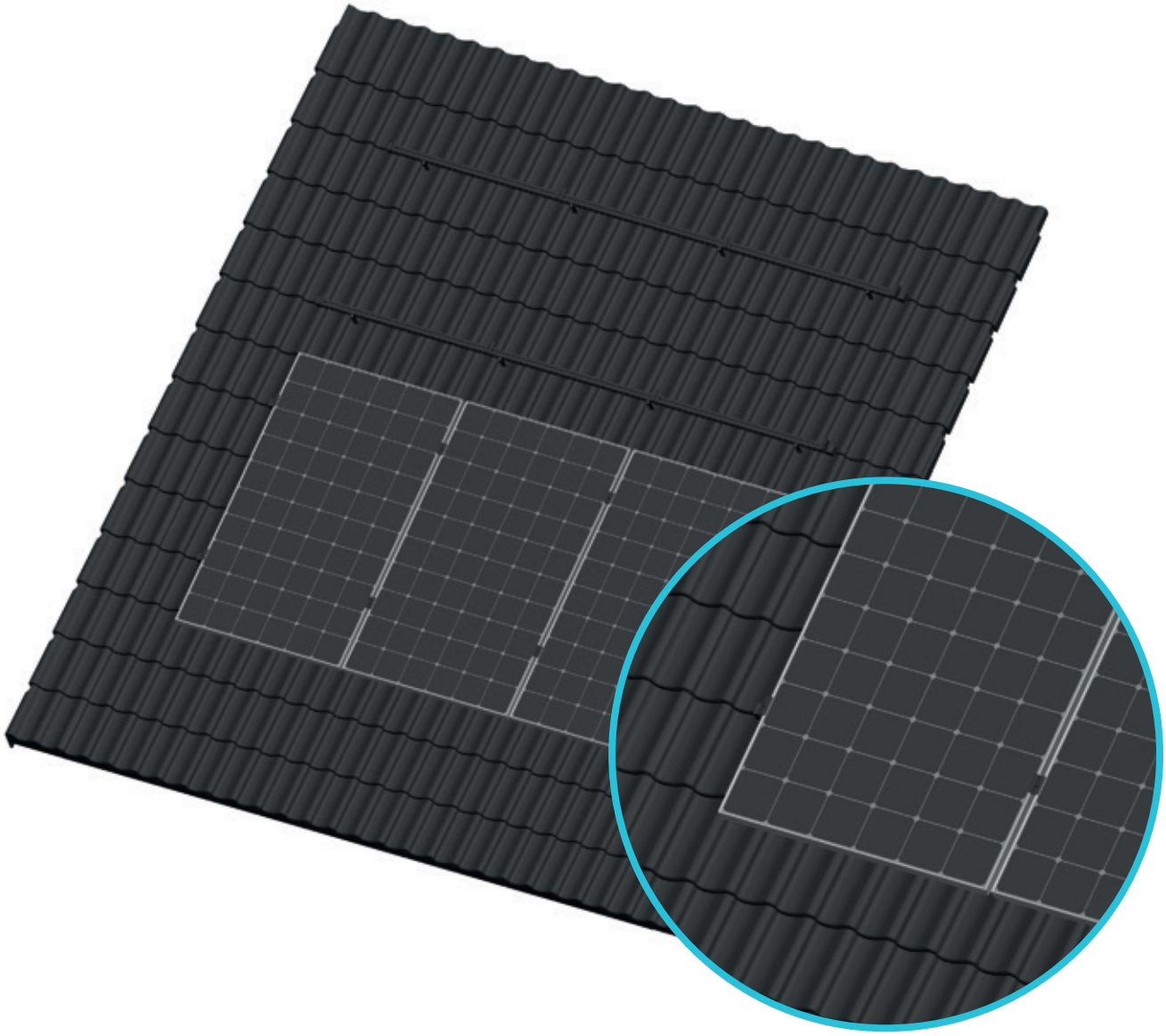
MOUNTING THE OPTIMIZER OR MICRO-INVERTER

Click the Optimizer clamp into the rail. Then slide the optimizer or micro-inverter with the mounting point into the bolt and tighten it.



BLACK EDITION

We also supply the Rails and Easy clamps in black.



EASY CLAMP MIDDLE BLACK

Article no.	Range
872630	26 - 30 mm
873134	31 - 34 mm
873540	35 - 40 mm
874145	41 - 45 mm
874650	46 - 50 mm

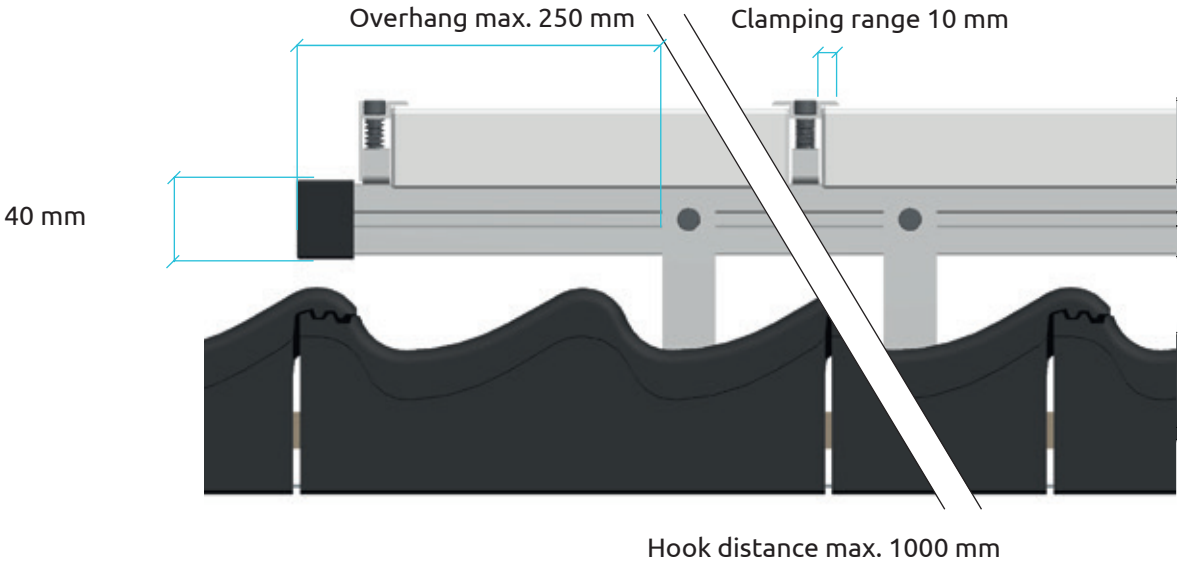
EASY CLAMP END BLACK

Article no.	Clamp height
860132	32 mm
860135	35 mm
860140	40 mm
860145	45 mm
860150	50 mm

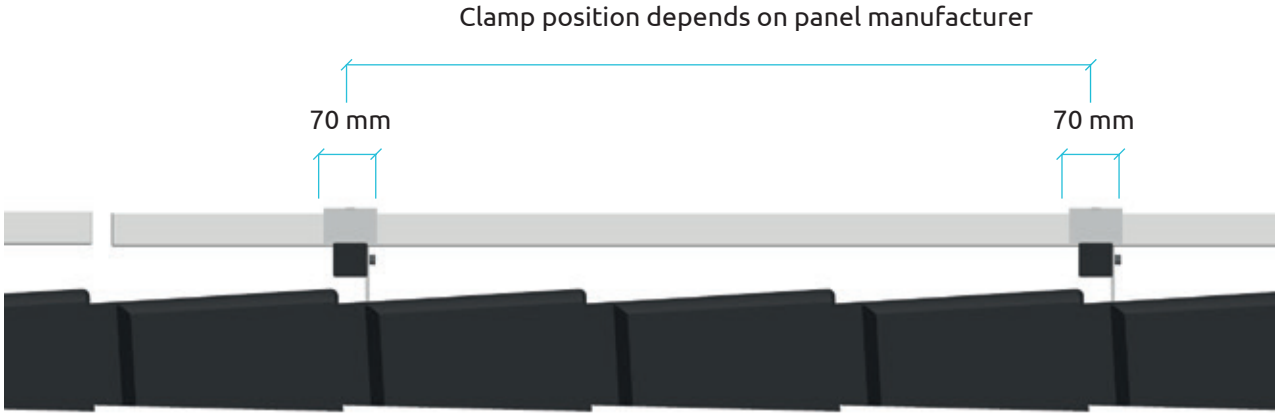
MOUNTING RAIL BLACK

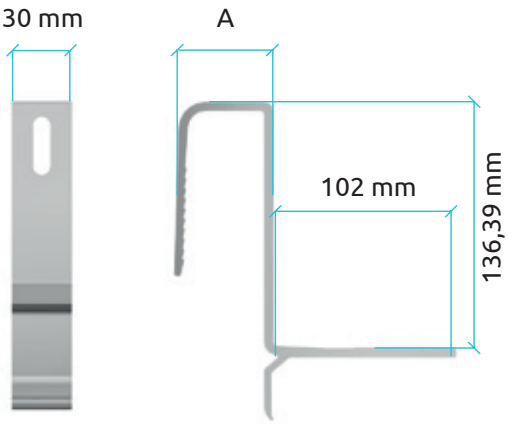
Article no.	Lenght
235860	5860mm

FRONT VIEW



SIDE VIEW





AVAILABLE LENGHTS MOUNTING RAIL 40X40 MM

Item	no.	226188	6100mm
Item	no.	225860	5860mm
Item	no.	235860	5860mm (black)
Item	no.	224710	4710mm
Item	no.	223550	3550mm
Item	no.	222400	2400mm
Item	no.	221240	1240mm

ROOF HOOK	A=
Article no. 200135	33-35 mm
Article no. 200145	43-45 mm
Article no. 200200	Adjustable

DISCLAIMER

BLUBASE

- This manual is a general guide (and therefore not project specific) for the simple and efficient installation of solar panels with the Blubase mounting system. No rights can be derived from it.
- The maximum building height for installing the Blubase mounting system is 12 meters. For taller buildings, please contact Blubase in advance for project-oriented customization.
- If the flat roof has a greater slope angle than 4 degrees, the Blubase mounting system must be secured/anchored to prevent shifting.
- An online calculation tool is available for the ballast calculation. Although this tool was developed in collaboration with TNO-bouw in accordance with NEN 7250, the results are intended as a guideline only. Blubase therefore does not supply ballast material.

IMPORTANT

- When installing solar panels on or on an existing building, a change is made to the building load and/or construction. It is therefore recommended to have the static calculations of an existing building updated by a specialist, taking into account the solar panels to be installed and current regulations such as NEN6702, NEN7250, NEN1991-1-4+A1+C2:2011 /NB:2011 and NPR 6708:2013 in particular for wind, snow and water loads.
- The building's insurer must be contacted in advance.
- The following structural matters, among others, must be checked and approved in relation to the existing structural facilities:
    - The additional weight of the entire PV system to be installed
    - Change in the geometry of the roof surface
    - Wind pressure, snow and water load with simulation of accumulation
    - The loads that occur for construction, roofing and insulation during installation
    - The suitability of roofing and insulation on site (point pressure) of the contact points of the mounting system with the existing structure
    - The consequences of thermal effects of building and PV system on each other
    - The consequences of any vibrations in the building and/or PV system