

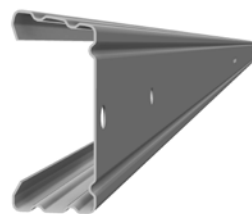
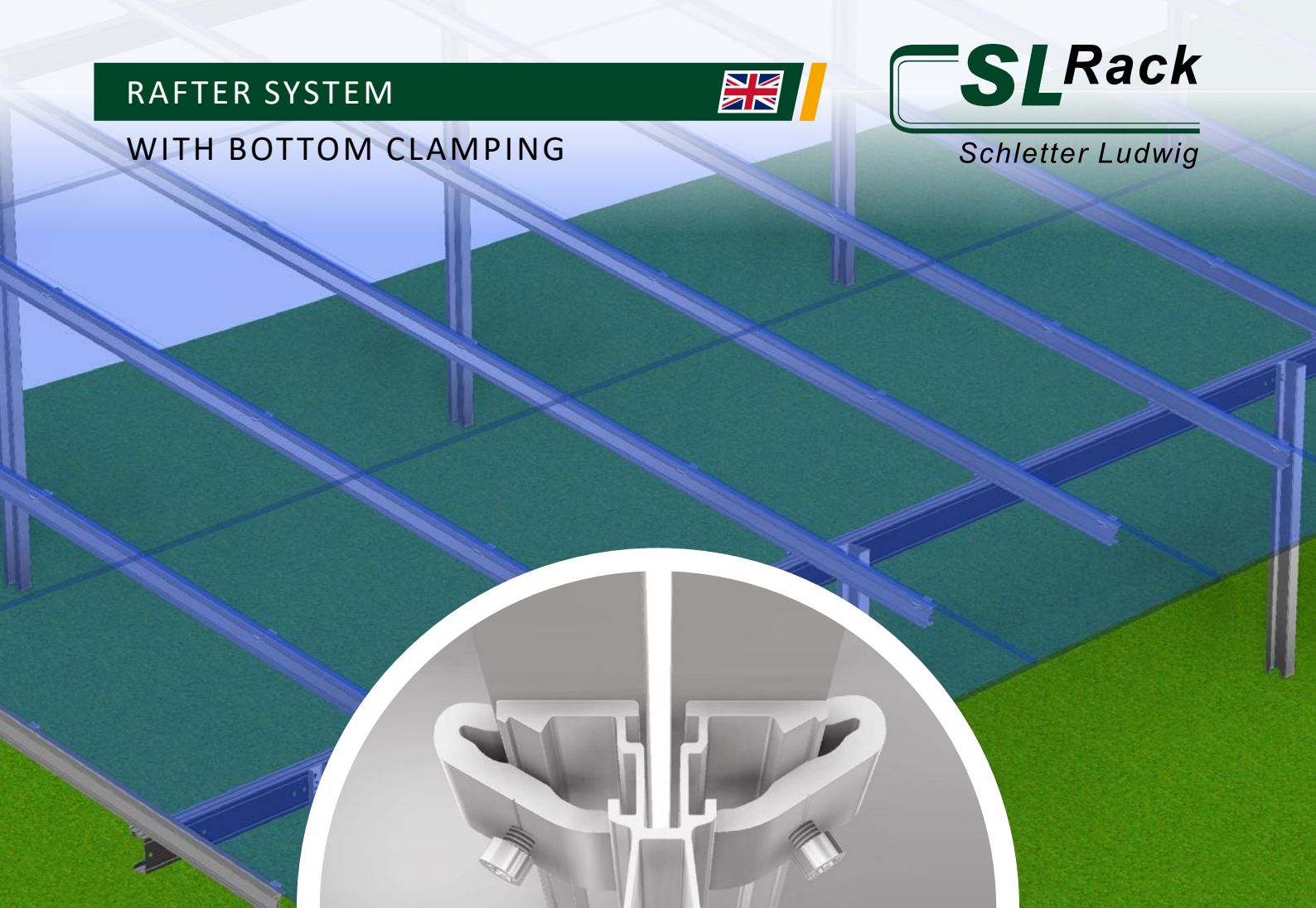
RAFTER SYSTEM



WITH BOTTOM CLAMPING

SL Rack

Schletter Ludwig



Learn more:
www.sl-rack.com

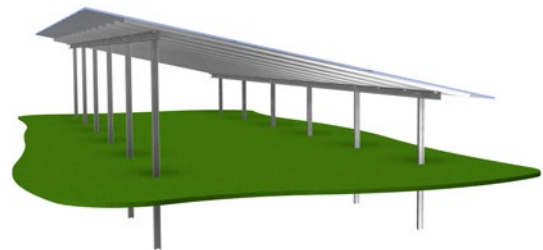
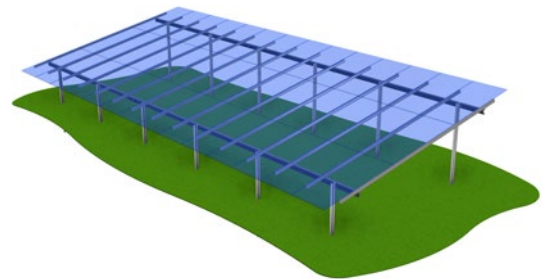
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GERMAN INNOVATION

Advantages of SL Rack Rafter System with bottom clamping

- » Easy, quick and safe to install from the bottom (even large panels)
- » Insert the clamp into the rafter from below and fixate it
- » Only 5- 16 mm distance between modules -> increased panel Count
- » Compatible with any frame height due to bottom clamping



SL Rack in numbers:

- 26**..... Years of experience
30..... GW installed worldwide
15..... Product specialists are happy to support you!
EU..... Almost exclusively manufactured in Germany and Europe



Visit our
website:
www.sl-rack.com



Check out our
YouTube channel:
[Watch videos »](#)

*Our warranty conditions apply.
They are available at www.sl-rack.com



Geology and Statics

Not only do we offer verifiable structural calculations for your ground mount system, but we can also determine the required embedment depth of the piles. In addition, we provide you with a professional assessment of atmospheric corrosion and an informative analysis with detailed information on soil aggressiveness. These will help you decide on the most suitable foundation solution.

Our team is happy to provide further information on the topics of geology and statics. Please contact us.

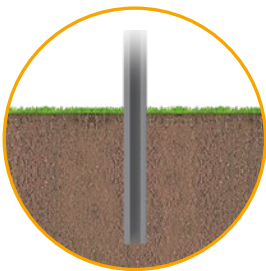
 Geologie@sl-rack.de



Types of Foundation

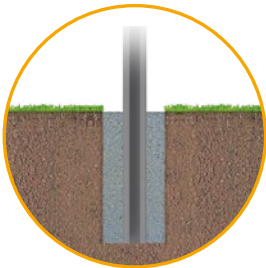
Normally, racking is installed on driven piles. The piles are driven into the ground with the help of a hydraulic pile driver. To ensure the stability of the system, the embedment depth is determined individually for each site on the basis of a geological report. In regions where the soil is not suitable for pile-driving (e.g. rocky subsoil and/or aggressive soils), the piles can also be anchored securely in the ground with concrete. For this purpose, holes are pre-drilled in the ground and the piles are set in concrete.

However, it is also possible to install concrete foundations above ground. In this case, the piles are connected to the concrete foundations via so-called foundation shoes. This method is intended for soils in which pile driving or drilling is not possible. Additional special solutions are offered through various helical pile foundations.



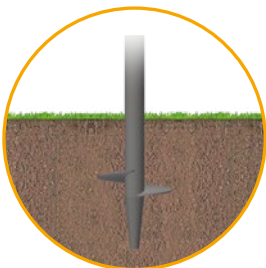
Pile-Driven Foundation

Piles are driven into the ground with the help of a hydraulic pile driver. Based on a geotechnical report the embedment depth can be calculated in advance. Extremely boggy, sandy or stony soils as well as very steep slopes can make piledriven foundations difficult.



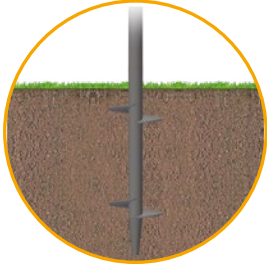
Cast-In-Place Foundation

If numerous obstructions in the soil require pre-drilling, the hole can be filled with concrete, either dry or at a consistency that matches the maximum moisture content of the earth. Another option is to fill the hole with a concrete-gravel mix. Then the pile can be installed using conventional Methods.



Helical Pile Foundation | Custom Solution

In case of extremely boggy, stony or sandy soils, helical piles can be used as an alternative. Helical piles allow a more shallow embedment depths, which can be particularly useful on landfills.



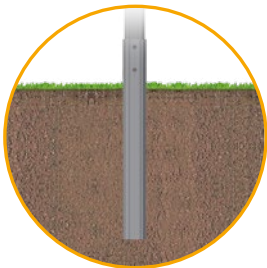
Double-Helical Pile Foundation | Custom Solution

For a more stable design or for better support in extremely boggy, stony or sandy soils, double helical piles can be used as an alternative foundation method.



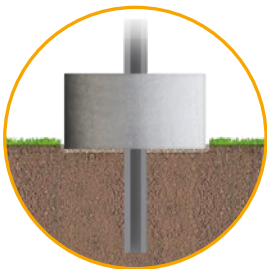
Compacted Special Grain Foundation

If backfilling with concrete has not been approved due to special official regulations or environmental conditions, or if a cost-effective alternative is needed, a sand-gravel mixture (grading curve 0-8) can be used for backfilling. After the backfill has been compacted, the pile can be driven into the ground using conventional methods.



Pile-Driven Foundation made of Special Plastic Material

Highly corrosive soils have special material requirements. The pile-driven foundation made of special plastic is UV-resistant and ensures a high durability due to the special plastic used for production. This component is particularly suitable for bogs and the likes. Use this advantage for your project.



Combined Ballasted/Pile-Driven Foundation

In case of problematic soil conditions- such as pile-driving obstacles, very aggressive soils, general prohibition to use concrete below the surface or in case of landfills, where only a shallow embedment depth is permitted- pile-driving up to a depth of 40 cm in combination with concrete ballast in the appropriate dimensions can be chosen as an alternative. While SL Rack will perform the calculations, the foundation itself has to be provided by the customer.

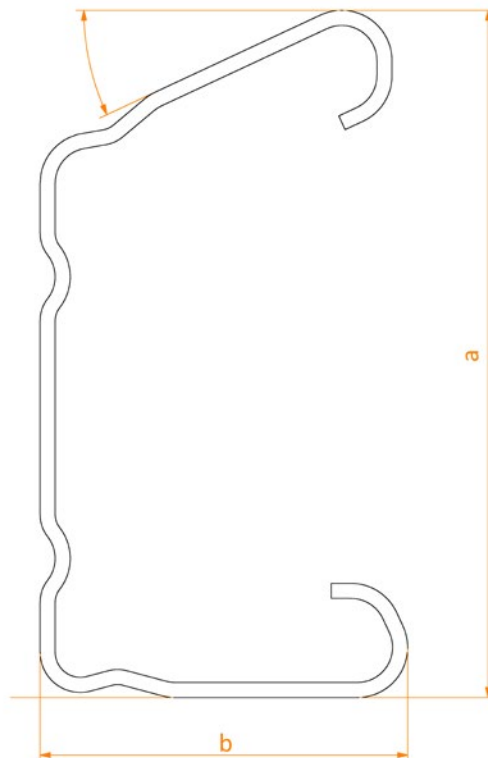
Pile

- » Pre-drilled holes allow a flexible attachment of the rafter-bearing girder



Dimensions

	a	b
Pile 120	120 mm	73 mm
Pile 136	136 mm	73 mm
Pile 156	156 mm	73 mm



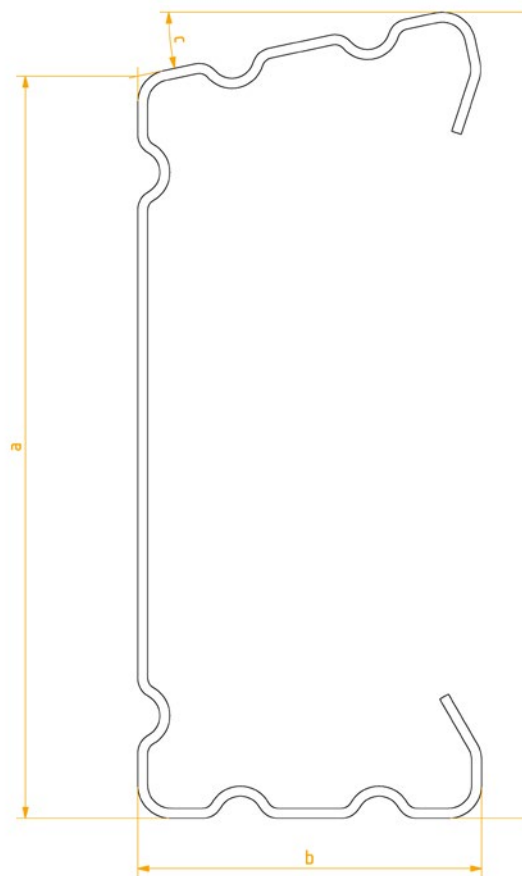
Technical Data

- » **Material:** Galvanized steel ZM430MAC

Rafter-Bearing Girder

Dimensions

	a	b	c
Rafter-Bearing Girder 143	134 mm	62 mm	10°
Rafter-Bearing Girder 145	134 mm	62 mm	12°
Rafter-Bearing Girder 147	134 mm	62 mm	15°
Rafter-Bearing Girder 150	134 mm	62 mm	18°
Rafter-Bearing Girder 152	134 mm	62 mm	20°



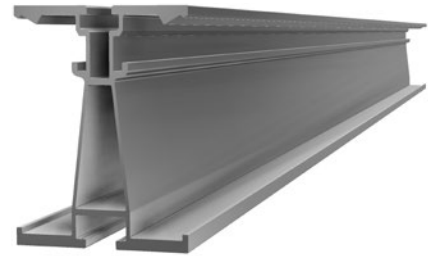
Technical Data

» **Material:** Galvanized steel ZM430MAC

Rafter 80

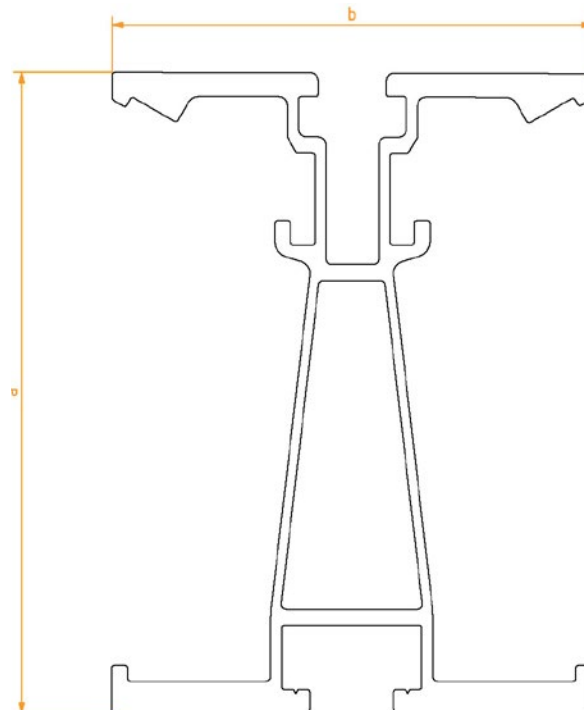
Item no. 81480-1000

- » Clamp channel for convenient bottom clamping
- » Screw channel for attachment of Steel Rafter Clamp (item no. 41502-00)



Dimensions

	a	b
Rafter 80	80 mm	60 mm



Technical Data

- » **Material:** Aluminum EN AW 6063 T66
- » **Weight:** 1,93 kg/meter

Steel Rafter Clamp

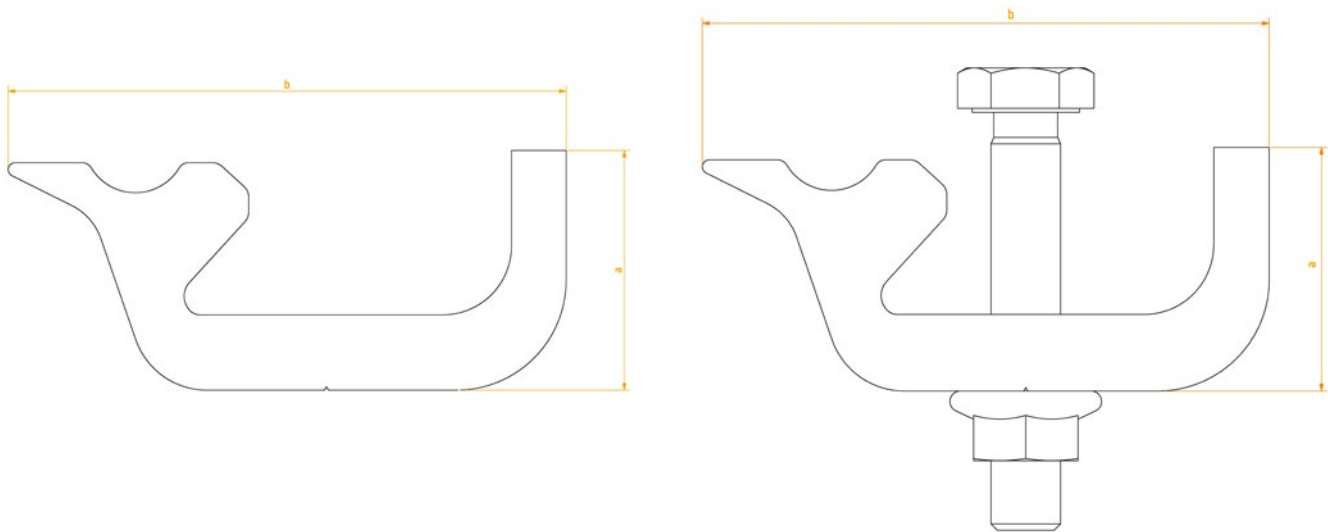
Item no. 41502-00

- » For the attachment of Rafter 80 (*item no. 81480-1000*) to Rafter-Bearing Girder (*item no. 823XX-1000*)
- » Convenient mounting from the bottom



Dimensions

	a	b	Length
Steel Rafter Clamp	28,5 mm	28 mm	60 mm



Technical Data

- » **Material:** Aluminum EN AW 6063 T66 (Clamp), stainless steel (cylindrical screw M6)
- » **Weight:** 0,0579 kg
- » **Contact area on module frame:** approx. 850mm²
- » **Tightening torque:** 10 Nm

Bottom Clamp

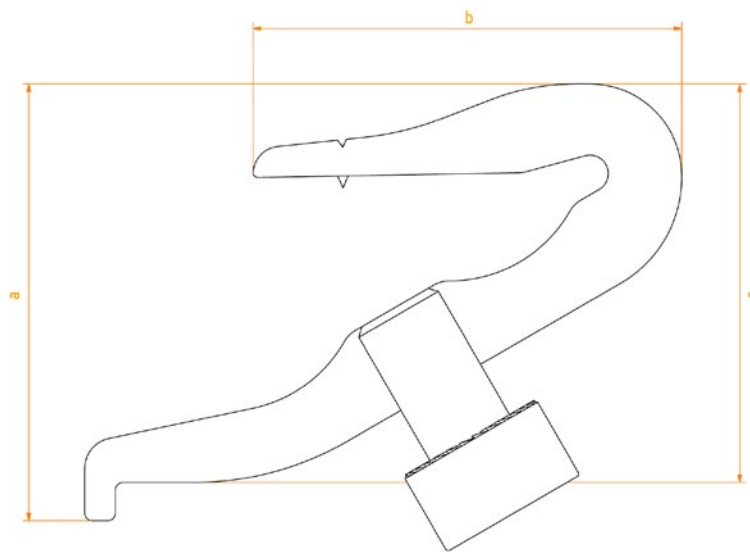
Item no. 81480-00

- » For module mounting from the bottom
- » Convenient attachment from below
- » Including pin for integrated grounding



Dimensions

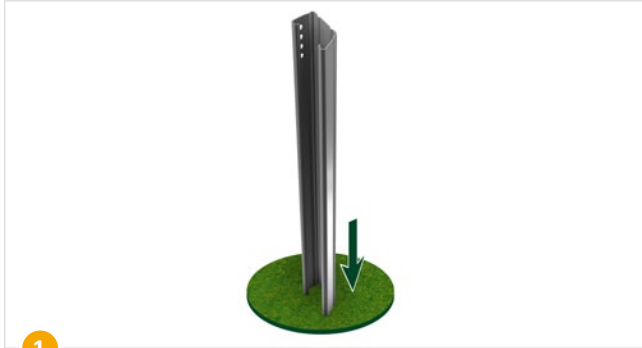
	a	b	c
Bottom Clamp	28,5 mm	28 mm	26 mm



Technical Data

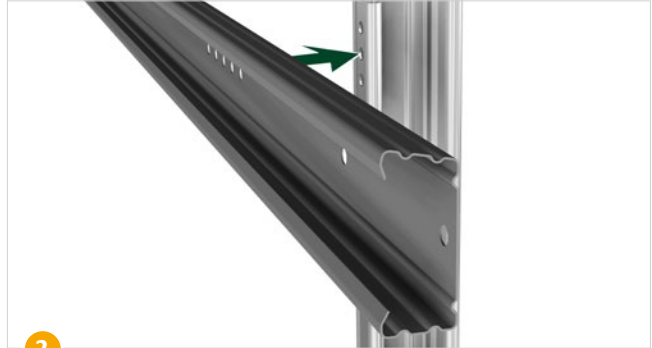
- » **Material:** Aluminum (clamp), stainless steel (cylindrical screw M6)
- » **Weight:** 0,0579 kg
- » **Contact area on module frame:** approx. 510mm²
- » **Tightening Torque:** 10 Nm

Installation: Pile with Rafter-Bearing Girder



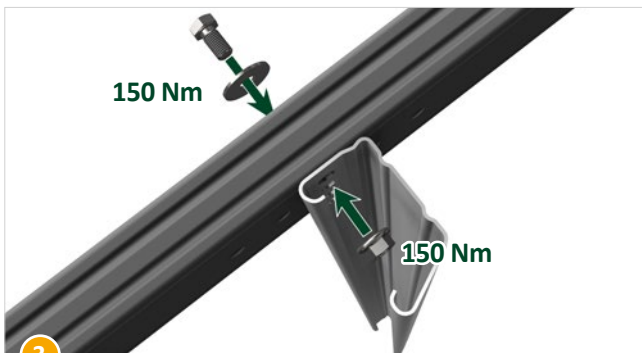
1

Install C-pile with a standard hydraulic pile driver in accordance with the respective ramming plan.



2

Align the rafter-bearing girder on the pile.



3

Fasten the rafter-bearing girder with a screw.



4

Done!

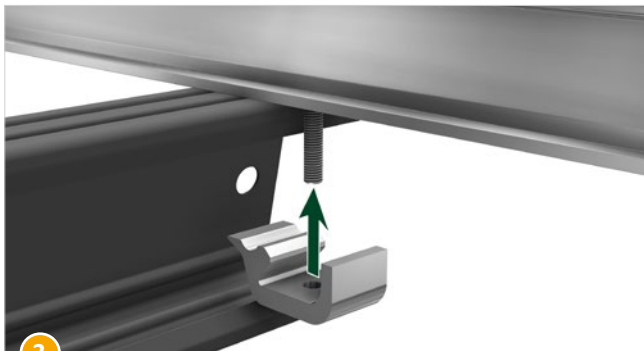
Installation: Rafter 80



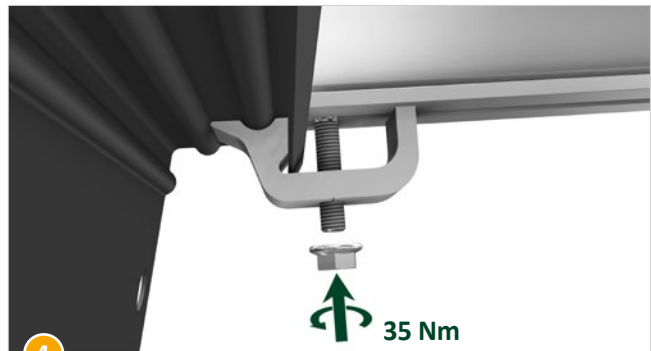
Position rafter on the rafter-bearing girder.



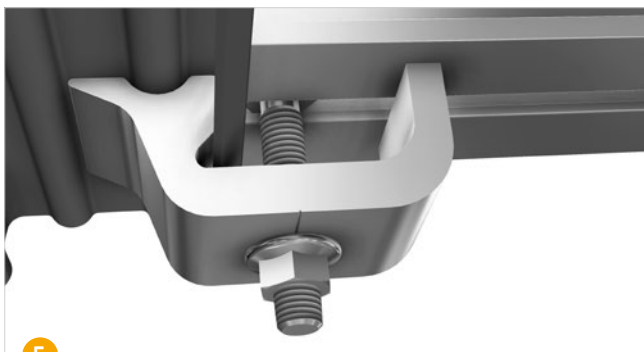
Insert the screw of the steel rafter clamp (*item no. 41502-00*) into the lower channel of the rafter and push it up to the stop of the rafter-bearing girder.



From below, slide the steel rafter clamp onto the screw.

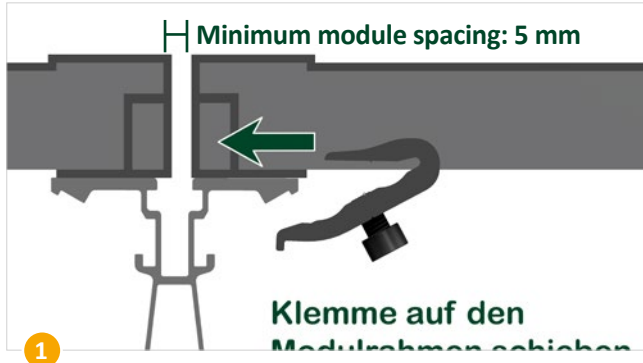


Fixate clamp by tightening the nut.



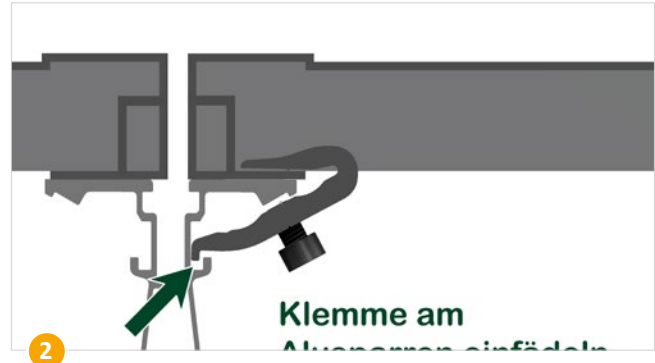
Done!

Installation: Bottom Clamp

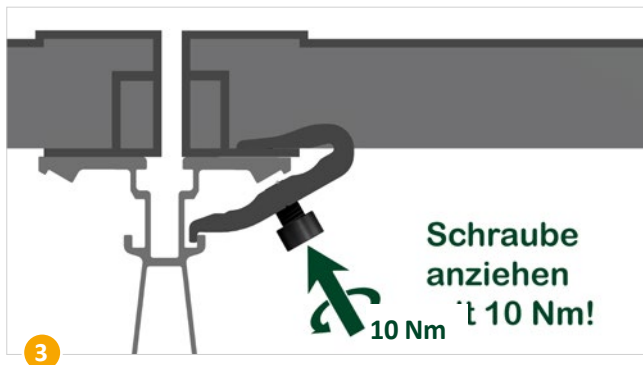


Push clamp over module frame.

Attention: Do not damage back foil!



Insert clamp into aluminium rafter.



Tighten M6 bolt with a torque of 10 Nm.



Correct installation – view from below.

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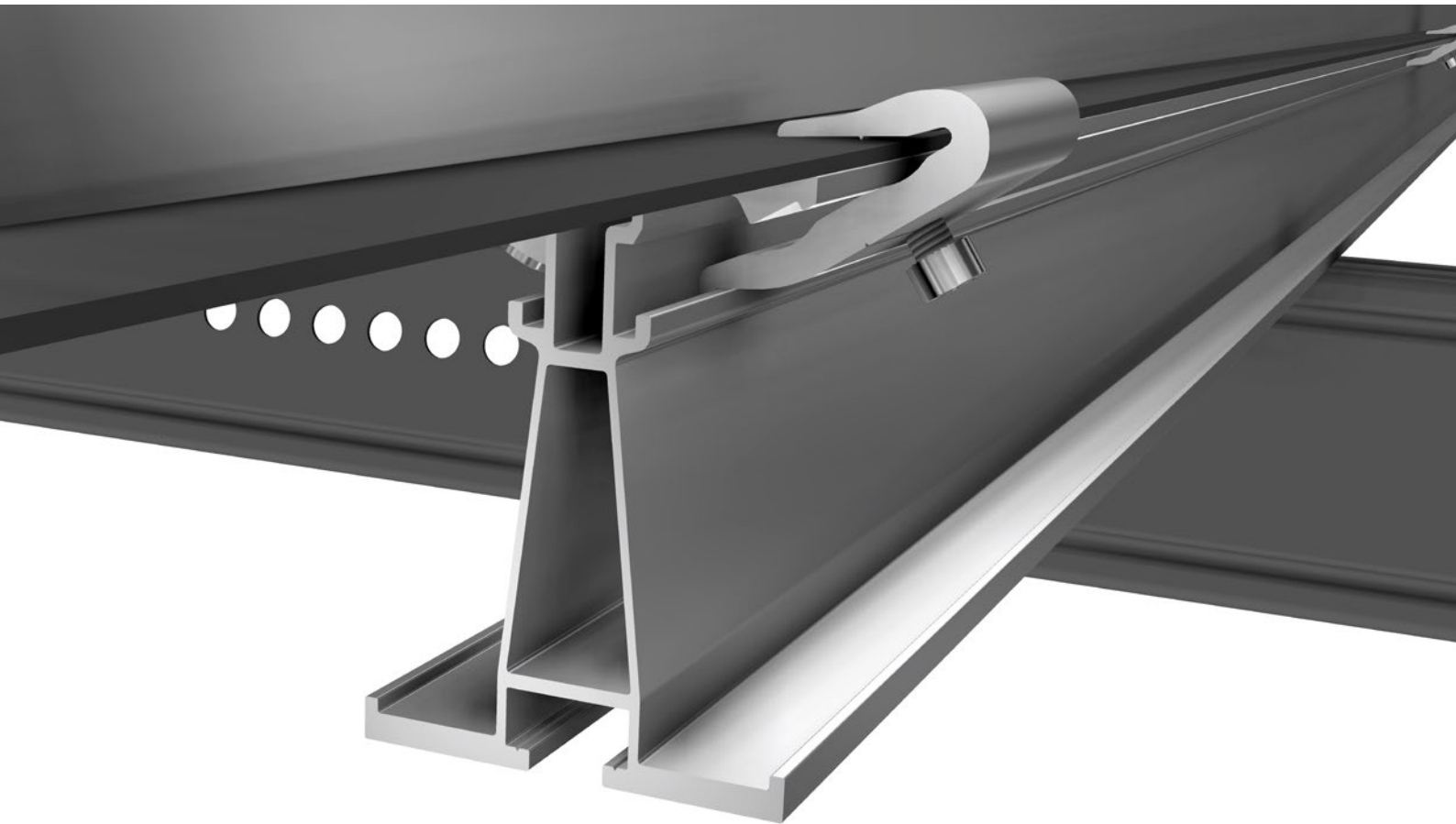
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changes and misprints.
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