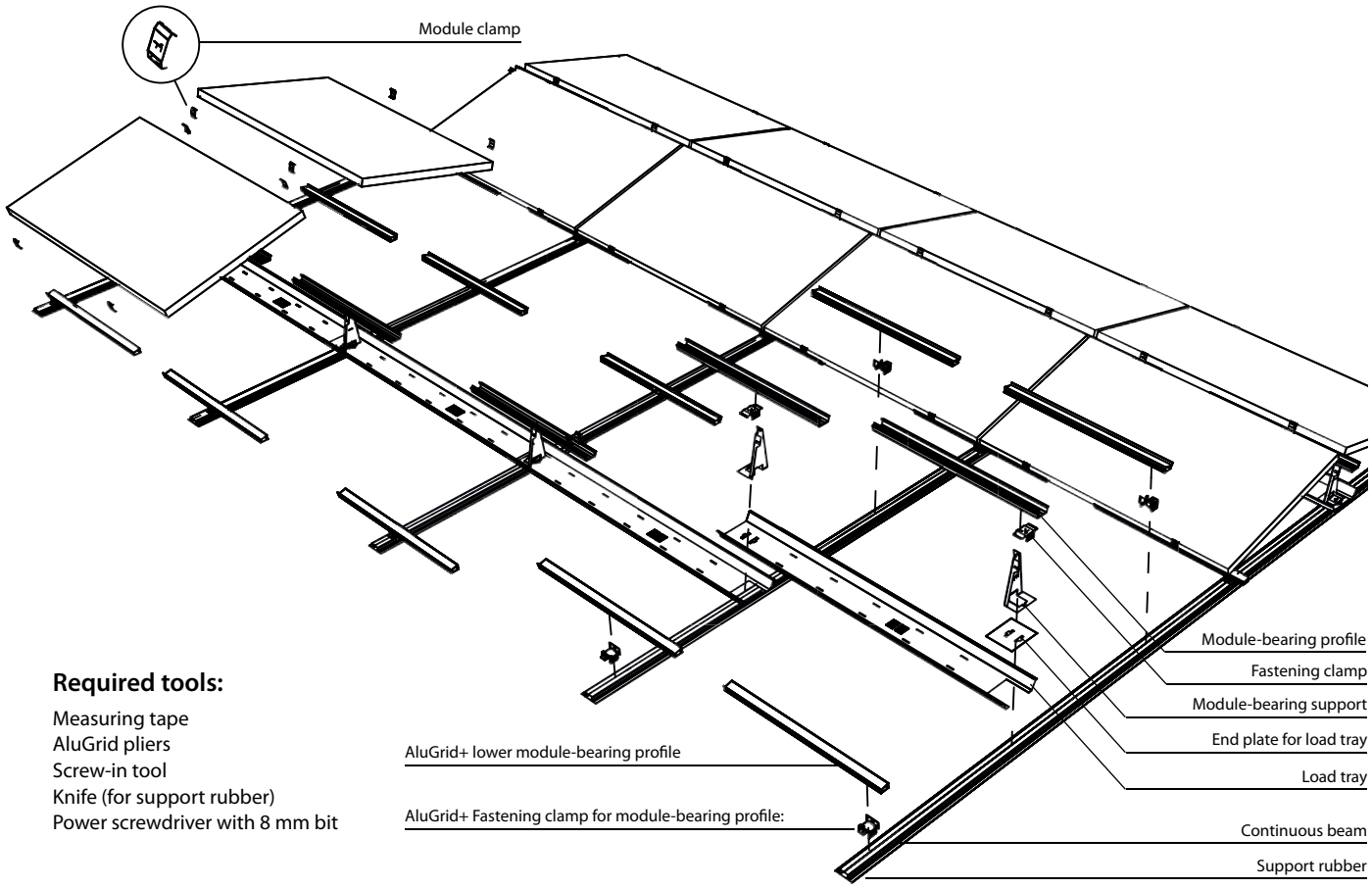
AluGrid100+

mounting instructions



Required tools:

Measuring tape
AluGrid pliers
Screw-in tool
Knife (for support rubber)
Power screwdriver with 8 mm bit

Safety instructions

The system is designed for snow loads up to max. 2.4 kN/m² So the first step is to check in what snow load zone the installation site is located.

The system has to be installed exclusively using the superimposed loads specified in the structural analysis of superimposed loads. You will receive this document together with the plant dimensioning from us or directly in the download area on our website: www.schletter.eu

Risk of breakage! Never step on PV modules, otherwise they will be damaged.

The planning, mounting and the putting in to operation of a solar energy plant must be carried out exclusively by qualified specialists. An unprofessional execution of the project can lead to damage to the plant and place people in danger.

Risk of electric shock! The mounting and maintenance of the PV modules must be carried out exclusively by qualified specialists. Please observe all the safety regulations issued by the manufacturer!

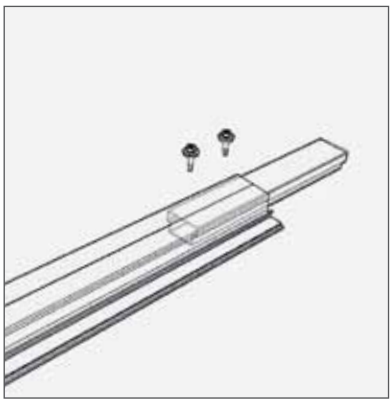
Risk of falling! There is a risk of falling when working on the roof as well as when ascending and descending the building. Accident prevention regulations must be observed and appropriate safety equipment must be used.

Risk of injury! Objects falling from the roof can cause injury to people. The danger area around the installation site must be sealed off and people close to this area must be warned.

❶ **Extending continuous beams**

- Continuous beams can be extended if required.
- Insert the AluGrid connector into two profiles and fasten it to both ends with two self-drilling screws each.

Tools:
Power screwdriver with 8 mm bit



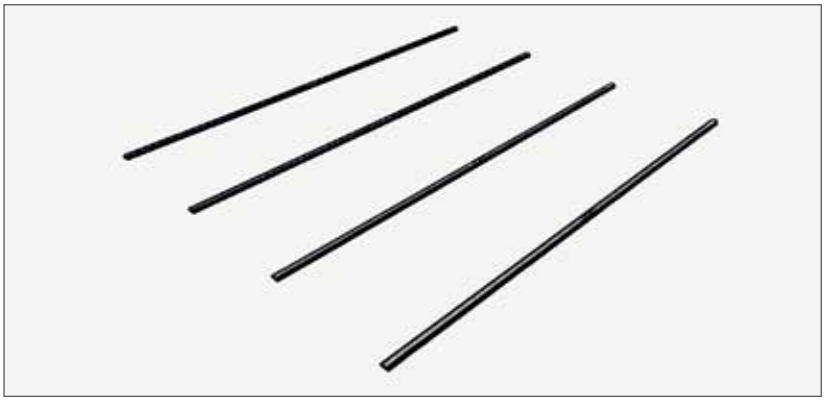
❷ **Mounting of the support rubber**

- Press the support rubber into the bottom sides of the profiles.
- Alternatively: Lay a surface protection mat
- If necessary, interrupt the support rubber each 300mm and leave a gap of 100 mm to let the water drain off. The customer has to check if water can drain off and has to lay a surface protection mats, if required.

❸ **Alignment of the continuous beams**

- The completely mounted continuous beams are arranged parallel to each other and at right angle to the module rows that are mounted later.
- Distance between the beams: Module length plus 20 mm (± 2mm)

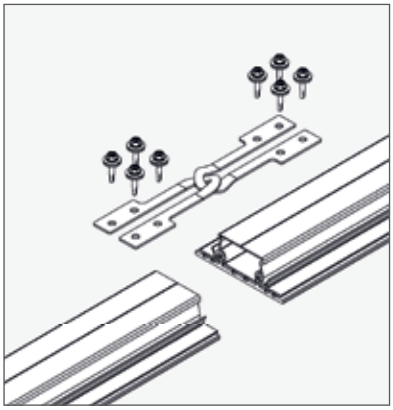
⚠ The maximum field size depends on the type of roof. On membrane roofs, the maximum field size normally is 10 m, on concrete roofs up to 30 m.

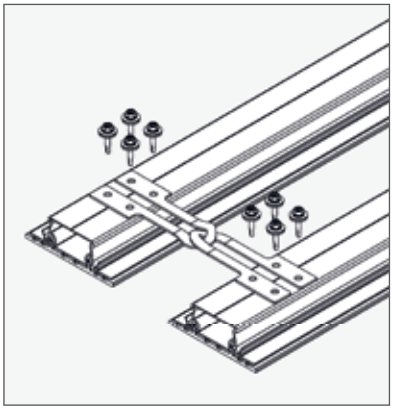


❹ **Securing against sliding**

- With roof inclinations of more than 3 degrees, it has to be made sure that the module fields do not slide downwards. There are two options:
  a) Horizontal fastening or
  b) Coupling of two opposite continuous beams using a tension connector at the ridge. For this purpose, fasten the connector from above to both beams from above with four screws each.
- Roof parapets can give extra protection against sliding.

⚠ AluGrid is not suitable for roofs with an inclination of more than 10 degrees.

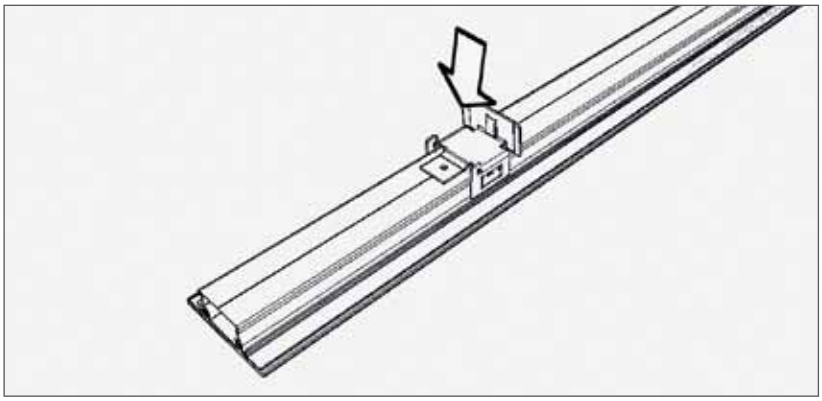




❺ Mounting of the AluGrid+ clamps

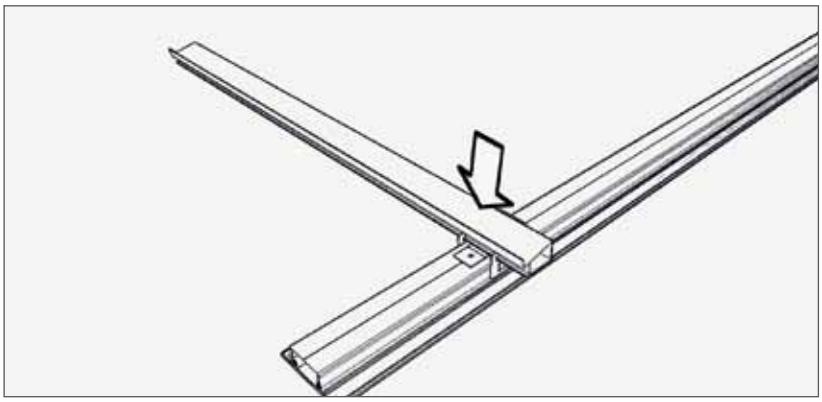
- Suitable shade distances and row distances have to be maintained.
- Let the fastening clamps snap in into the profiles at the the appropriate points - **see the dimensional drawing on page 4.**

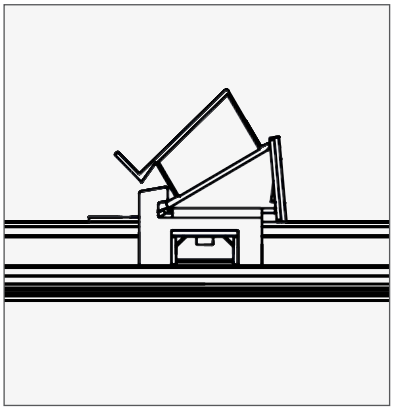
⚠ For structural reasons, at least two module rows have to be mounted. If this is not possible, please consult our technical advisers.

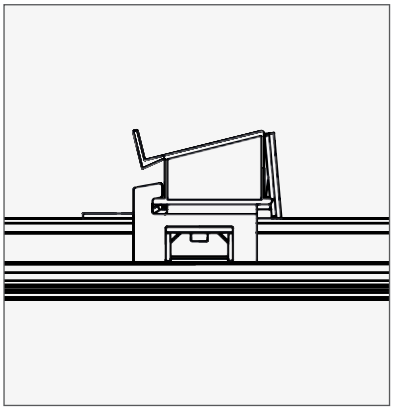


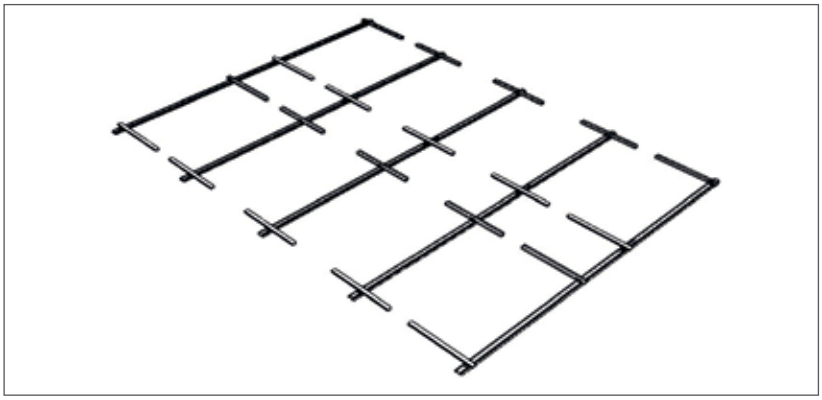
❻ Mounting of the module-bearing profiles

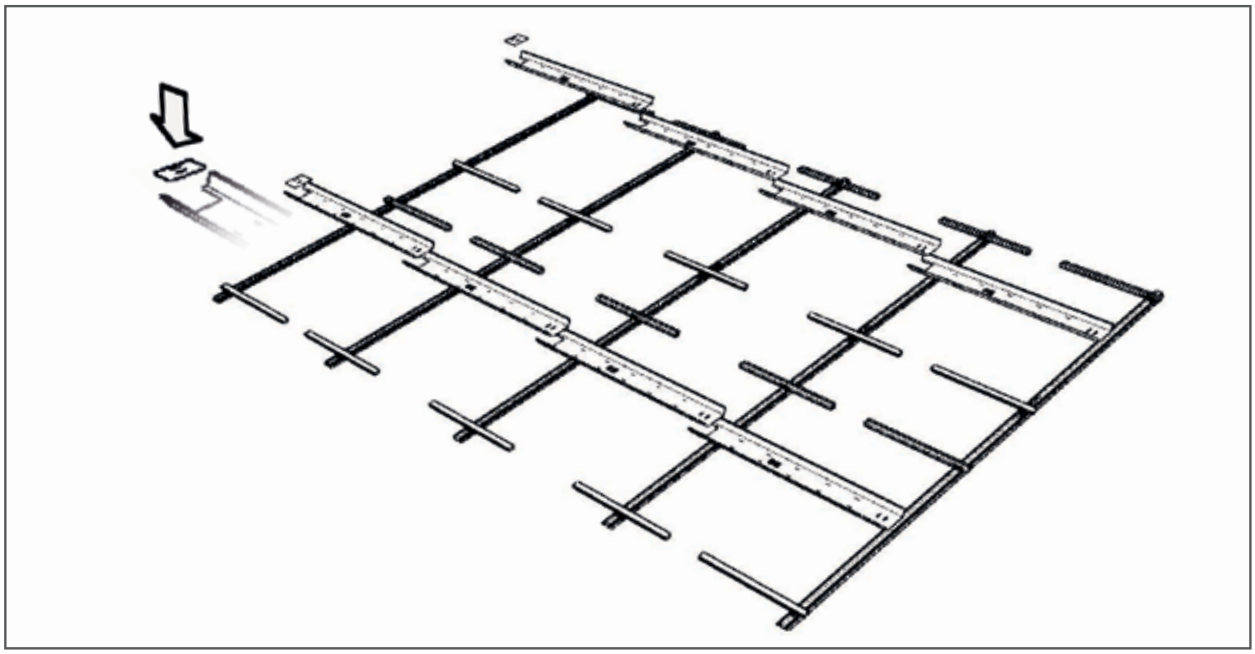
- Hook in the module-bearing profiles at the front of the Alugrid fastening clamps and let them snap in at the back.
- Align the profiles at the edge (with a certain projection) and centrally in the interior area - **as shown in the picture at the bottom at this page.**







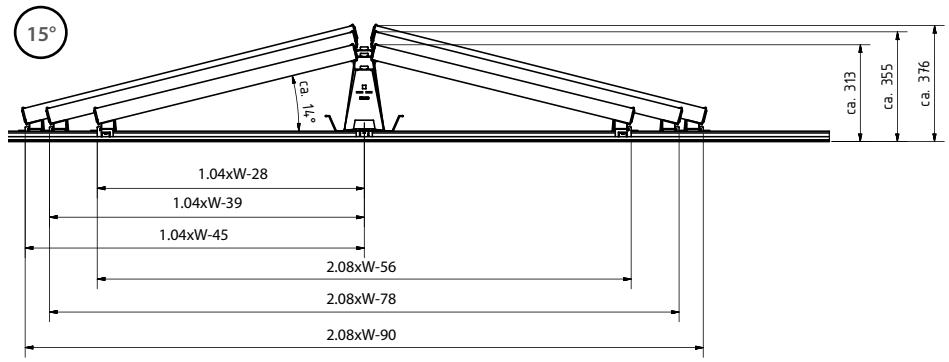


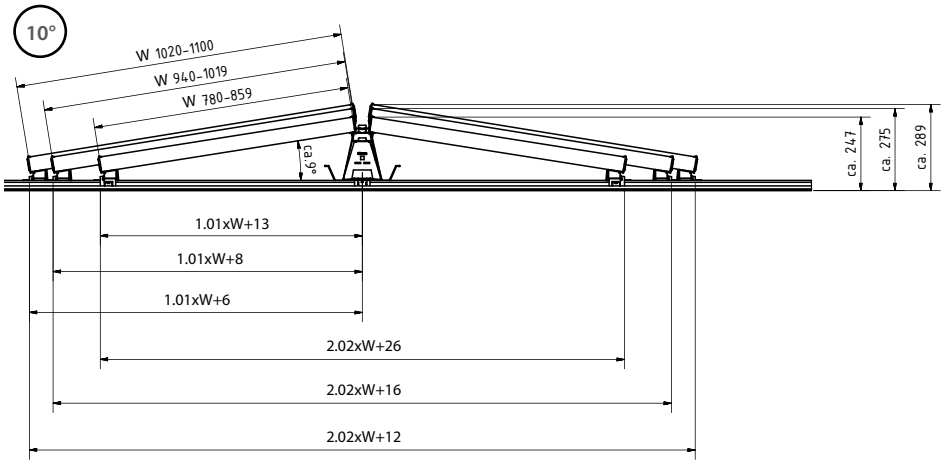


❼ Arrangement of the load trays

- Arrange the loading trays accordingly as shown in the dimensional drawing.
- Overlap the metal sheets as shown in the picture above.
- Fasten the end plate to the last cut-out.

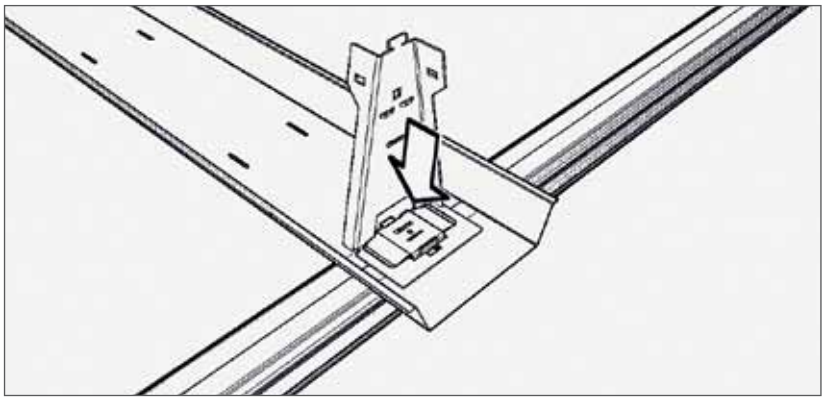
⚠ The calculation formulas shown here lead to approximate values. In any case, the real module dimensions have to checked and used for the calculation. We recommend to check the module dimensions also at the rack, because there may be deviations due to uneven roofs or tolerances, for example.





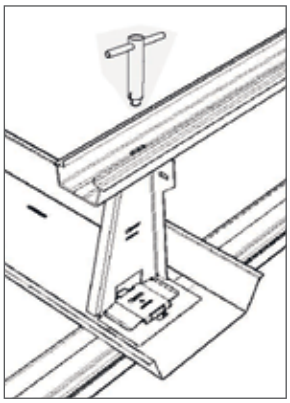
❽ **Mounting of the module-bearing supports.**

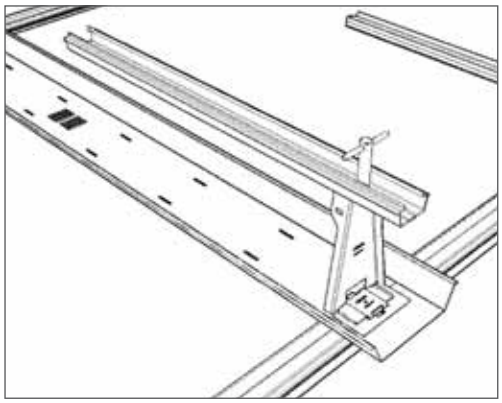
- Put on the first module-bearing support with the supporting side facing inwards.
- Put the fastening clamp into the cut-out of the metal sheet and let it snap in into the continuous beam below.



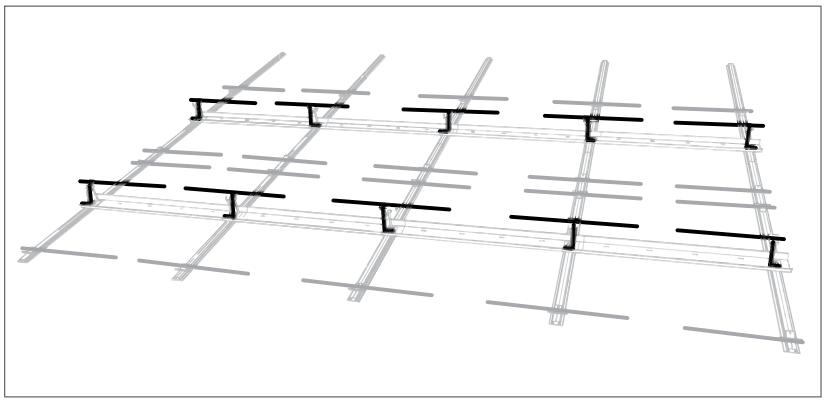
❾ **Mounting of the module-bearing profiles.**

- Put the profile through the support nose onto the support.
- Put the screw-in tool onto the support nose and hold it - do **not** turn it!
- turn the profile by 90°.
- With the edge profiles, the lateral cut-out has to be used (turn the long side inwards) and in the interior zone the central cut-out.



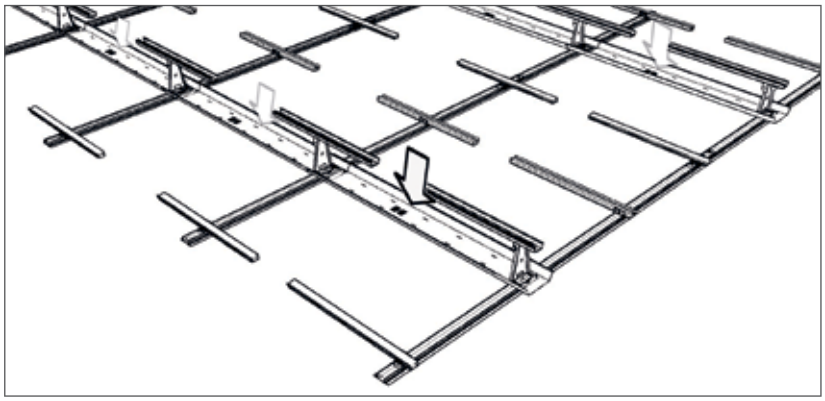


⚠ Arrangement: For a better load distribution, arrange the module bearings as shown in the picture at the right. The bearings at the edge always have to be arranged with the supports facing inwards.



❿ **Loading**

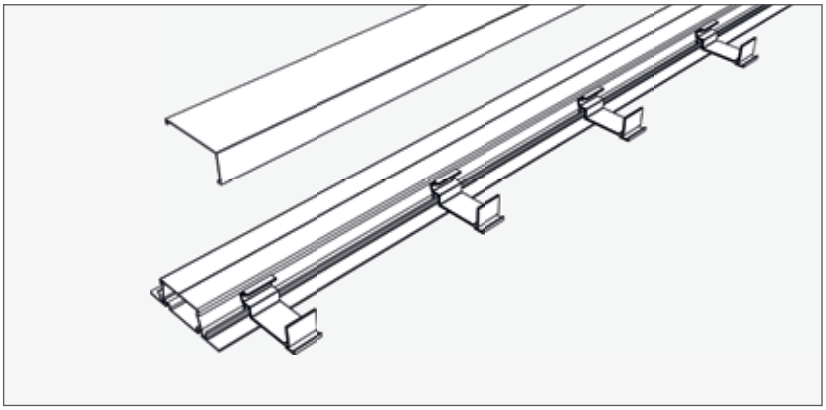
- Fill in the load trays as specified in the structural analysis of superimposed loads.
- You will receive the structural analysis of superimposed loads together with the plant projecting from us or directly in the download area on our website: www.schletter.eu



⚠ Warning! The distributed load must not exceed the excess load-bearing capacity of the roof!

(The load for the fastening of the solar fastening system is not included in the scope of delivery of the AluGrid system).

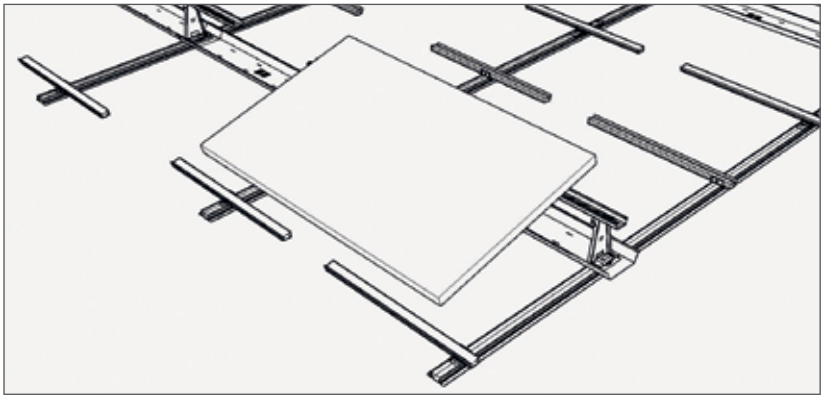
⓫ **Wiring between the module rows**
- Fasten the plastic clips for the cable covering to the continuous beam.
- Lay in the cable
- Close the covering

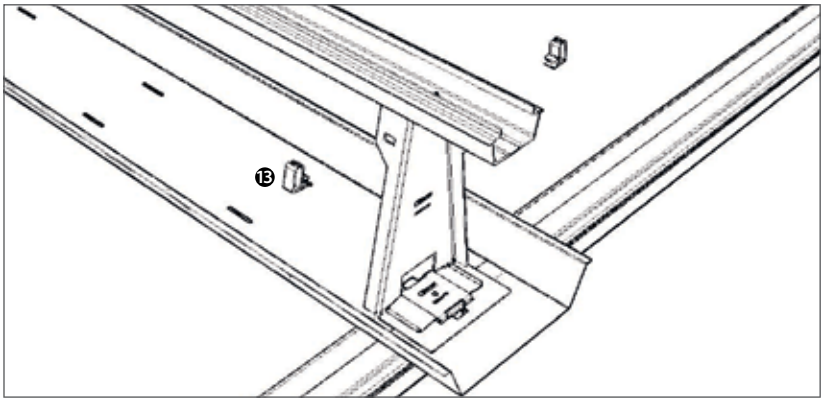


⓬ **Inserting the lower edge of the module**
- Put the lower edge of the modules on the module-bearing profiles.

⓭ **Cabling**
- Put the cable clips into the holes that are intended for that purpose.
- Press the cable into the clips.
- Connect the module cables correspondingly.

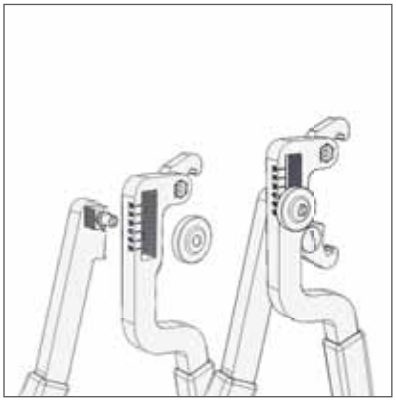
⓮ **Inserting the lower edge of the module**
- Put on the upper edge of the module on the upper bearing profiles.

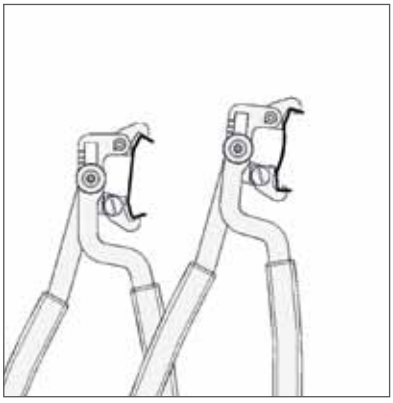




⓯ **Preparation of the AluGrid pliers**
- Set the AluGrid pliers according to the size of the modules.

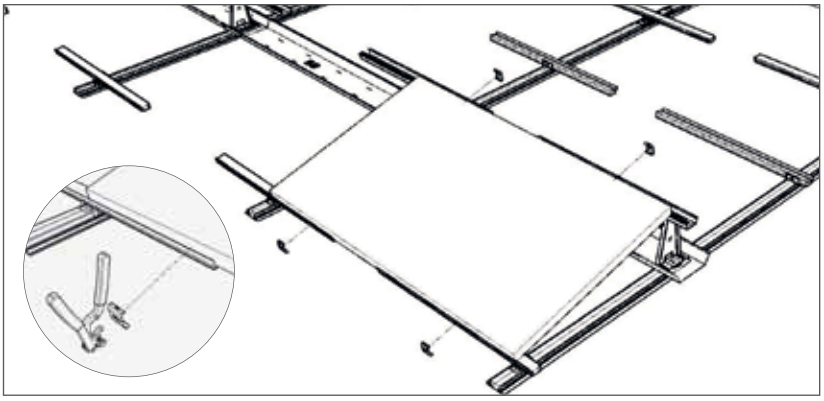
⚠ Make sure that the gripper jaws are moveable!

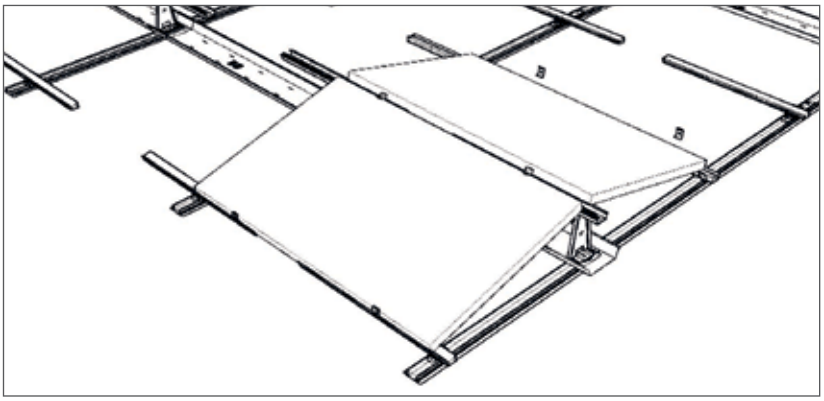


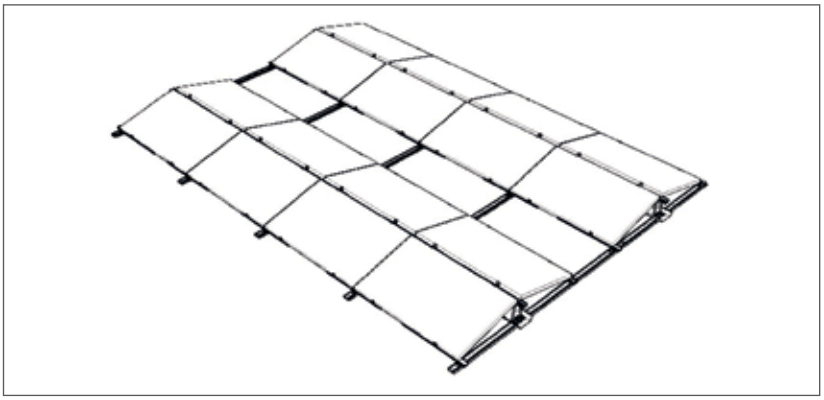


⑯ **Fastening of the modules**

- Span the module clamps using the AluGrid pliers, hook them into the lower module-bearing profiles and let them snap onto the module frame by releasing the clamp.
- Fasten the modules twice at the bottom and twice at the top.







For more information on our systems, please visit our website: **www.schletter.eu** under Downloads in the Solar section.