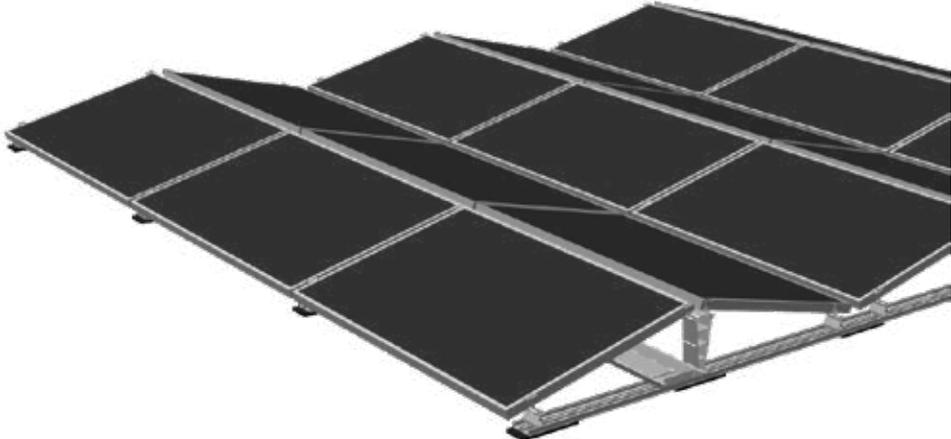


SCHLETTER

The Solar Mounting Group

FIXGRID18

INSTALLATION GUIDE



INSTALLATION MANUAL FOR SIMPLE ALIGNMENT (E.G. SOUTH)

TOOLS NEEDED

Tape measure

Screwdriver with TX drive T40 bit (module installation) and socket wrench insert with SW8 socket wrench (Windsafe installation)

FURTHER REQUIRED DOCUMENTATION

General installation manual – installation and project planning

Installation manual Rapid16 module clamps

Product sheet FixGrid18, FixGrid18 kit

FASTENING TORQUES

Screw connections M8: 15 Nm

Exception: self-drilling screws must be screwed in the direction of the end stop

SAFETY INSTRUCTIONS



The system must only be installed with ballast according to load statics. This information is available from the Schletter configuration tool together with the system plan.



Break hazard! PV modules may be damaged if stepped on.



Planning, installation and commissioning of the solar power system must only be performed by qualified technical personnel. Improper execution can result in damage to the system and endanger persons.



Electrical current hazard! Installation and maintenance of the PV modules must only be performed by qualified technical personnel. Observe the safety instructions issued by the PV module manufacturer!



Falling hazard! Working on the roof as well as ascending and descending poses a risk of falling. It is vital to observe accident prevention regulations and use appropriate fall protection equipment.



Injury hazard! Falling objects pose a risk of injury to people. Prior to installation, set up barriers in the hazard area to warn people nearby.

INSTALLATION INSTRUCTIONS



Ensure compatibility between the flat roof seal and the installation system. Roof drainage must be incorporated into the system plan.



Compensatory measures may need to be implemented in case of very uneven roofs or roof seals in order to ensure even load placement.



Necessary distances to roof edges must be maintained.



The maximum field size depends on the type of roof. For film roofs, it is no more than 10 m, and for concrete roofs it may be greater in some cases.



For roofs with substrate or gravel covering, a sufficiently slip-resistant connection must be ensured.



Please check the existing incline of the roof and whether the installation system needs to be secured against slipping.



The surface load may not exceed the remaining load capacity of the building!



The partial surface pressure acting on the roof cladding and insulation under the base profiles must never exceed the maximum permissible surface pressure.



Current country-specific stipulations and regulations must be observed.



Roof cleaning! It is imperative that contaminations such as moss, foliage, dirt, stones, etc. are removed in order to ensure that the base profiles are evenly distributed.



If a lightning protection system is in place, it must be determined to what extent the system must be integrated by a certified lightning protection company. It must also be checked whether the installation changes the requirements for lightning protection.



Installing a single row of modules is **not** permissible for static reasons!



Prior to installation, the roof must be checked for all types of damage: especially water beads or damage to the roof cladding. Any damage must be documented with photos in order to protect against potential claims for compensation.



The system is designed for modules with a width of 950-1050 mm (typical module dimensions according to current standards). Other module dimensions are available upon request and with special verification. Observe the manufacturer's information on module clamping.



Only install original Schletter parts!



Use the current installation manual! Available on our website: www.schletter-group.com under downloads in the solar section.

INSTALLATION GUIDE

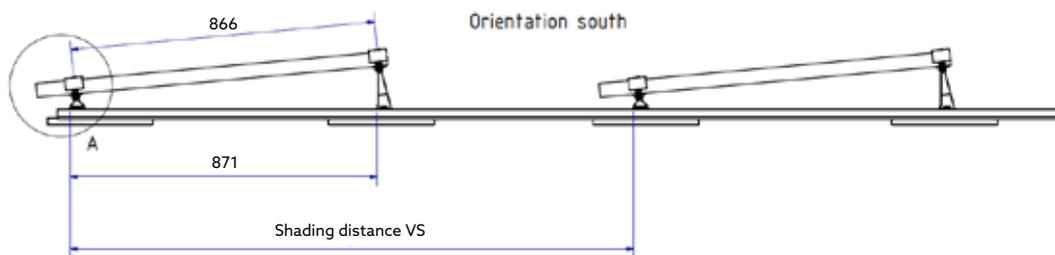
1. Defining base profile lengths and module support distances

The length of the base profile depends on the selected shading distance VS, the module width and the number of module rows. The shading distance can be calculated with the configuration tool. This distance is 1600 mm for kit systems.

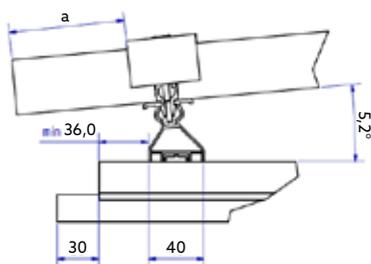
FixZ system profiles are always mounted at a fixed distance while the module frame width at the top is always flush with the Rapid16 module clamps. Depending on the module width, the module may protrude at the lower support, which is illustrated in the following drawings as dimension a (Dimension a = module width - 950 mm).

The base profile length can be selected from six standard lengths (2150, 2650, 3150, 4200, 6000, 6300 mm) and combined with each other. The base profiles can be connected to the internal connector, item no. 129078-000. The maximum permissible field size must be observed!

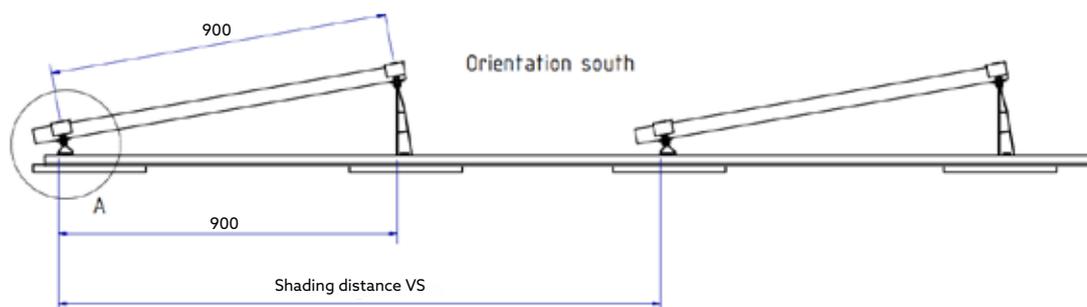
Version 6°:



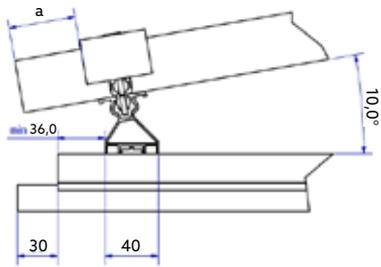
Detail A:



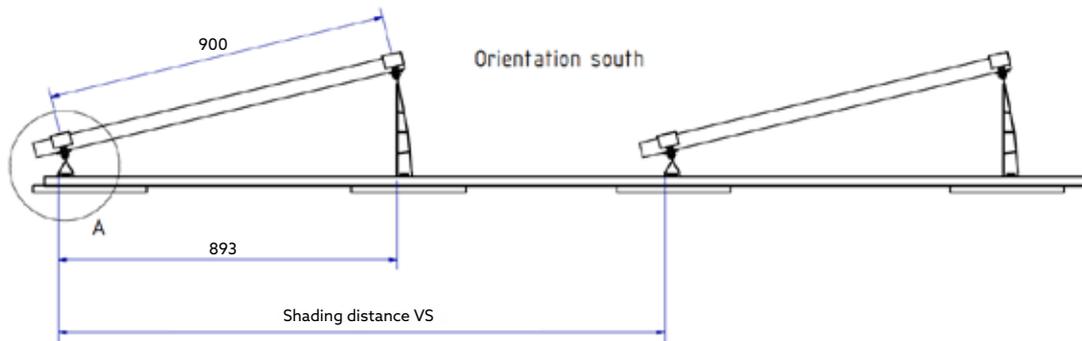
Version 10°:



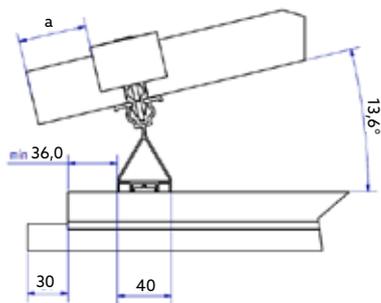
Detail A:



Version 13°:



Detail A:



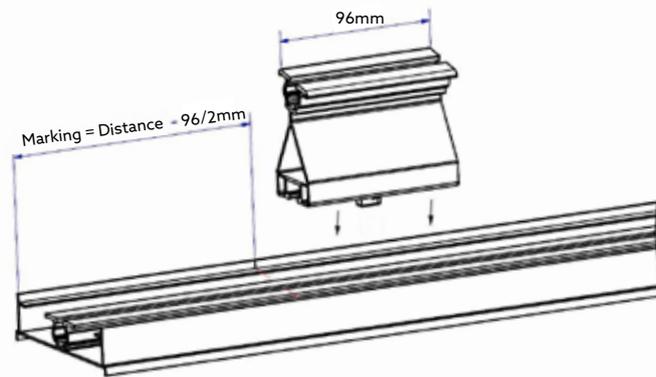
Installation times can be optimised by pre-assembling a row of base profiles beside each other on assembly stands with module supports.

2. Installation of the module support with a pre-assembled screw-in connector on the base profile

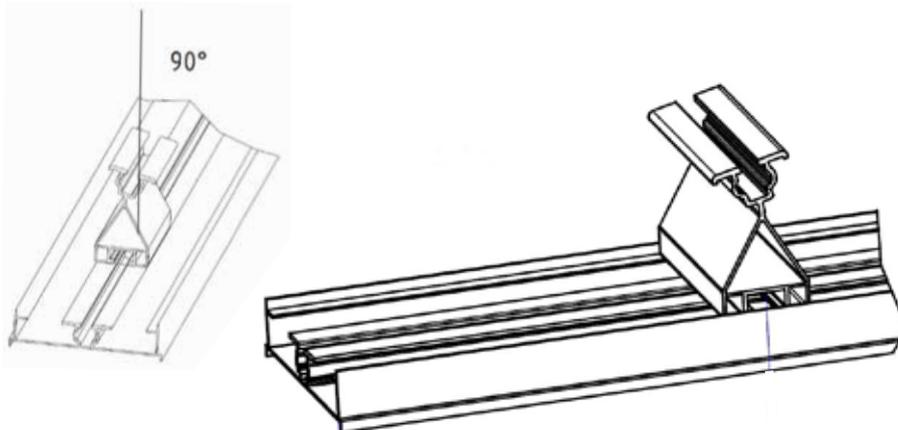
Marking for the installation of the module support:

Front edge of the module support = distance - 96/2 mm

Front edge: place the support on the marking and be mindful of the rotational direction!



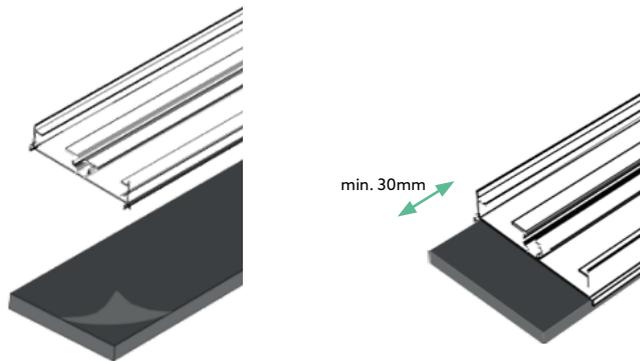
Turn clockwise 90°.



Observe the appropriate module and row distances for the profile and module installation.

3. Installation of the structural protection mat

Adhere the structure protection mat cuts (300/110/20 mm) to the base profile after removing the protective film. Allow for an overhang of at least 30 mm at the ends of the profile.



The installation distances of the structural protection mats below the base profile depend on the selected installation version.

Version A

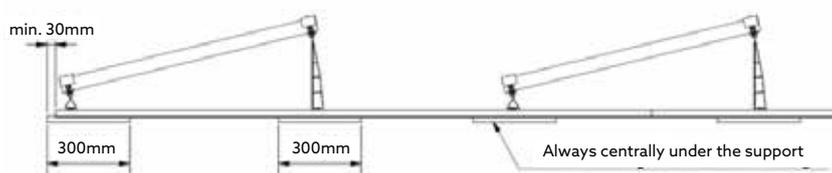
- Place 20 mm thick, 300 mm long strips centrally under each support.
- Load placement on a small surface (for light loads and/or firm substrate)
- An additional structural protection mat should be positioned under the joints of the base profiles!
- Almost uninhibited drainage is possible for transversely flowing roof water.



The permissible surface pressure of the roof must be checked!



Adequate drainage of rainwater must be ensured!

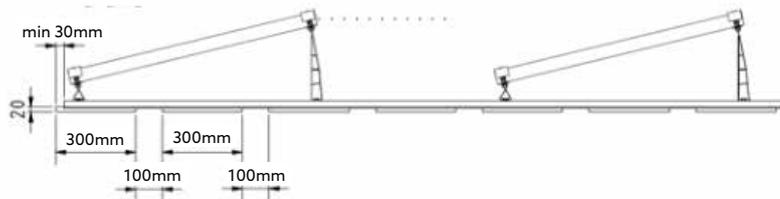


Version B

- Place 20 mm thick, 300 mm long strips with a distance of 100 mm between them.
- Load distribution on a large surface (for high loads and/or soft substrate with low permissible surface pressure).
- Also suitable for transversely draining roof water.



The permissible surface pressure of the roof must be checked!

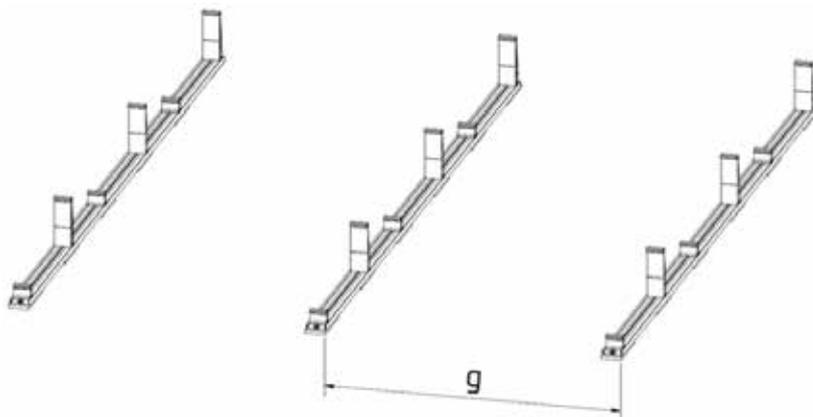


In the case of rainwater flowing crosswise, ensure sufficient clearance. This distance must be measured on site based on the local precipitation volume.

4. Alignment of the base profile

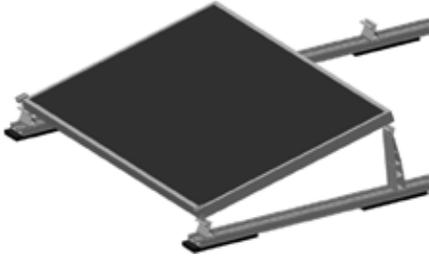
Align the base profiles parallel to each other as the FixZ System Profiles18 are aligned and at a right angle to the base profiles on the substrate.

Distance g = Module length + 23 mm



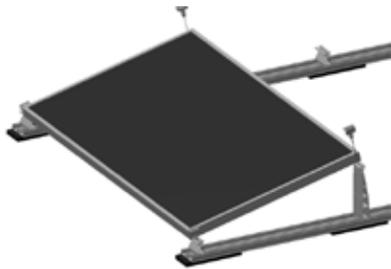
5. Placing the first module

- Snap in and position the Rapid16 end clamps at the edge of the module field. Also snap in the Rapid16 middle clamp with a generous distance so that the module can be inserted between the clamps.
- Place the module on the FixZ System Profiles18 and align the lower edge with the pre-inserted Rapid16 clamps. Be mindful of the alignment of the modules with respect to the module row.



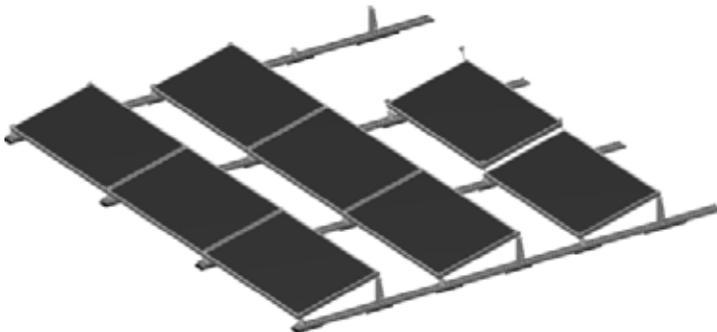
6. Installing the first module

- Place and tighten the end clamps (bottom and top) on the module and fasten with M8 (T40) screws.
- Place the middle module clamp on the module but do not tighten.
- Connect module cables according to the plan.



7. Installing further modules

- Place the next module. Tighten the middle clamps (bottom and top) between the modules with M8 (T40) screws.
- Pre-install further middle clamps at the free side of the module.
- Connect module cables according to the plan.
- Repeat steps until the last module of the row is installed.

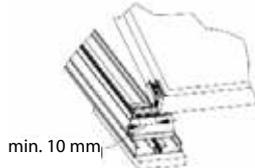


8. Installing the last module in the row

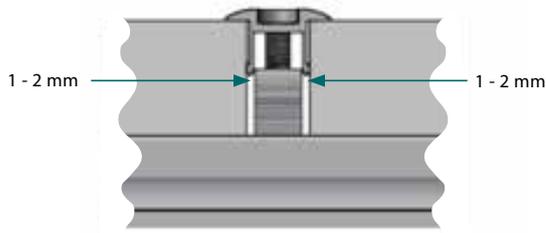
- Place the last module.
- Tighten the middle clamps (bottom and top) between the modules with M8 (T40) screws.
- Install end clamps at the free module side and tighten.
- Connect module cables according to the plan.



Insert end clamps at least 10 mm from the end of the profile.



Observe the module spacing for middle clamps.

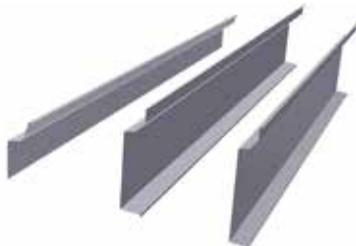


9. Installing the Windsafes

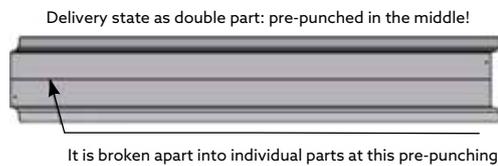
There are two length types for Windsafe sheets depending on the incline version:

FixZ Windsafe	
169018-170	FixZ-7 Windsafe up to 1700mm
169018-210	FixZ-7 Windsafe up to 2067mm
169017-170	FixZ-10 Windsafe up to 1700mm
169017-210	FixZ-10 Windsafe up to 2067mm
169019-170	FixZ-15 Windsafe up to 1700mm
169019-210	FixZ-15 Windsafe up to 2067mm

Version 6°, 10° and 13°

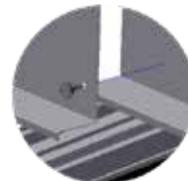
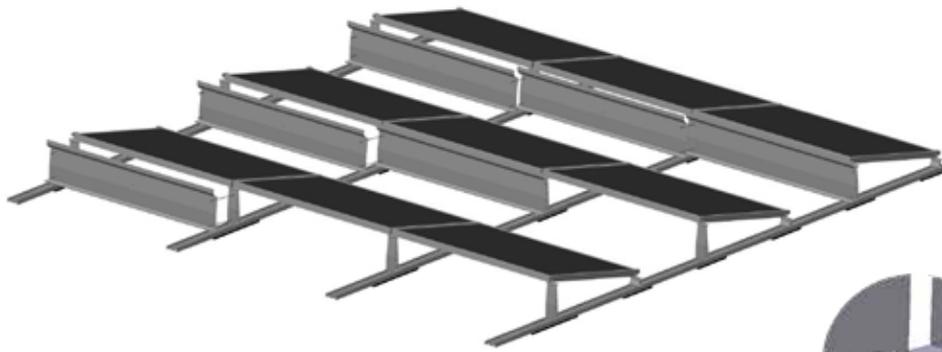


Windsafe 6° delivery state

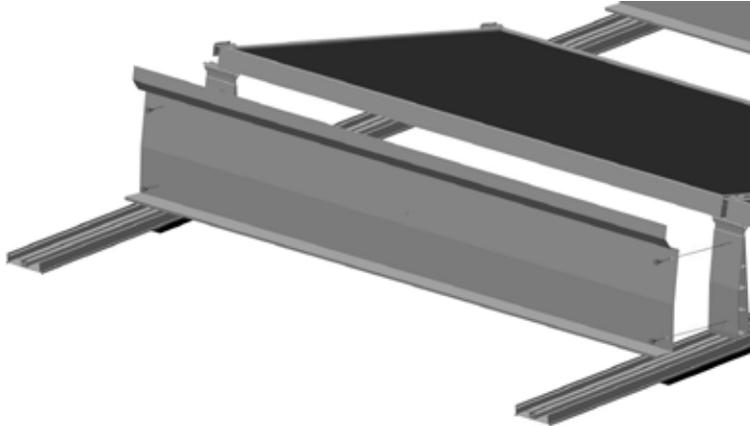


The Windsafes of the 6° version are fastened with one screw, and the 10° and 13° versions with 2 screws per module support.

- Viewed from the back, the Windsafes are installed from right to left. The first Windsafe must be placed on the base profile and centred on the two supports.
- The Windsafe is attached with thin sheet metal screws through the holes (version 10° and 13°) on the right side to the upper FixZ System Profile18 (version 6° with only one screw).
- Place further Windsafes on the base profile, align them laterally and on the right through the holes of the upper Windsafe and screw on both Windsafes to the upper FixZ System Profile18. Fasten the last Windsafe at the left side at the same height using two thin sheet metal screws.



A single Windsafe is fastened with two thin sheet metal screws on each side (version 10° and 13°, for 6° with only one screw per side).

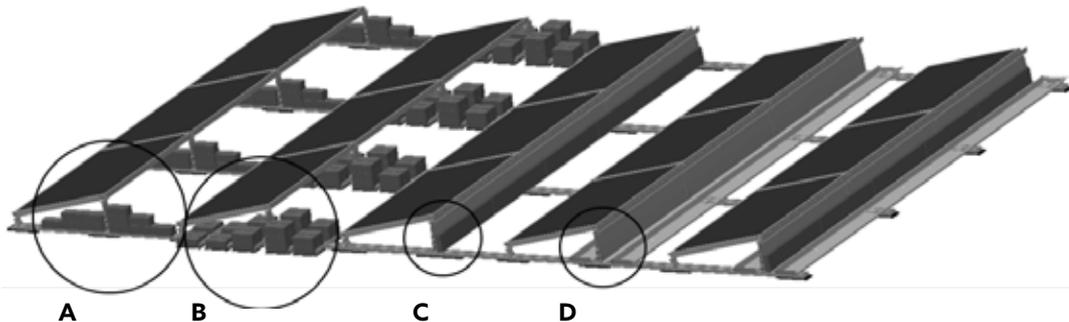


Windsafes are only to be installed at the designated locations according to the static specification. In many cases, Windsafes are not required in the interior area of the module field.

10. Installing the ballast

There are principally 4 ballast installation options:

- ▶ Ballast with concrete stones 100 mm wide on the base profiles (see Detail A)
- ▶ Ballast with additional trough (see Detail B)
- ▶ Ballast with standing lawn edging stones on the Windsafe (see Detail C, for 13° version only; it is recommended to secure the stones against tipping)
- ▶ Ballast with additional ballast shafts (see Detail D)

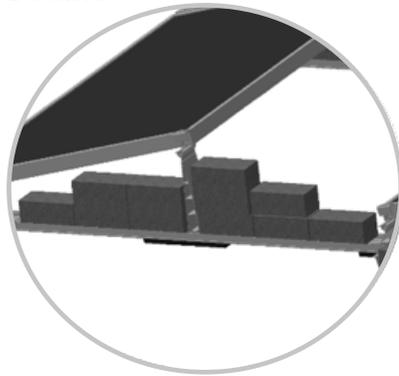


Information on ballast is available with the system plan from the Schletter configuration tool.

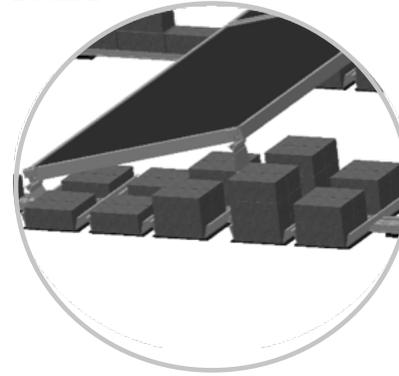


Fasten the structural protection mat pieces to the additional trough with fastening flaps. (Ballast is not included in the scope of delivery.)

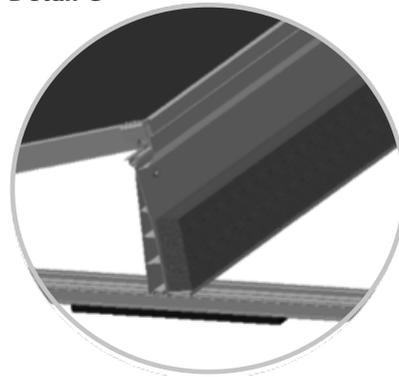
Detail A



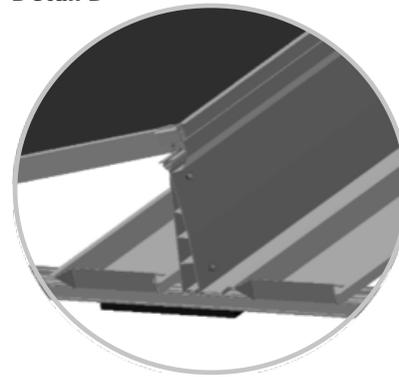
Detail B



Detail C



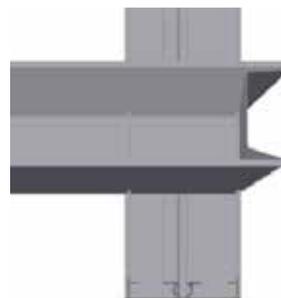
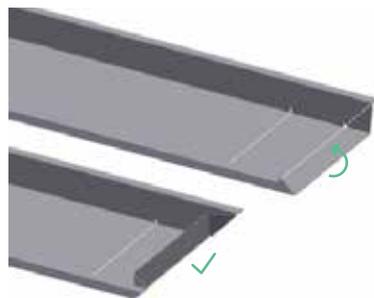
Detail D

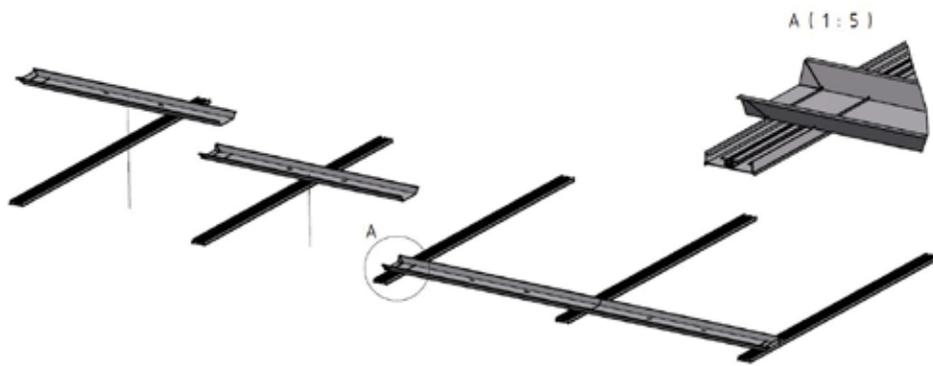


Placement of ballast with additional ballast shafts (Detail D)

If the ballast shafts are filled with gravel, then gravel run-out at the ends of the rows can be prevented by folding the shaft ends upward. The ends of the ballast shafts must be folded at the perforation.

The first ballast shaft is placed from the right with the recesses and upstand on the base profiles. All further shafts are rotated by 180 degrees (recesses left) and laid from right to left. The shaft is always positively locked in the base profile with the side of the slots in the base profile. The end must be folded up again at the last ballast shaft.





Further information regarding our systems is available from our website:
www.schletter-group.com under Downloads in the solar section.



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