

FIXGRID PRO

ASSEMBLY INSTRUCTIONS



Assembly instructions
for southerly orientation

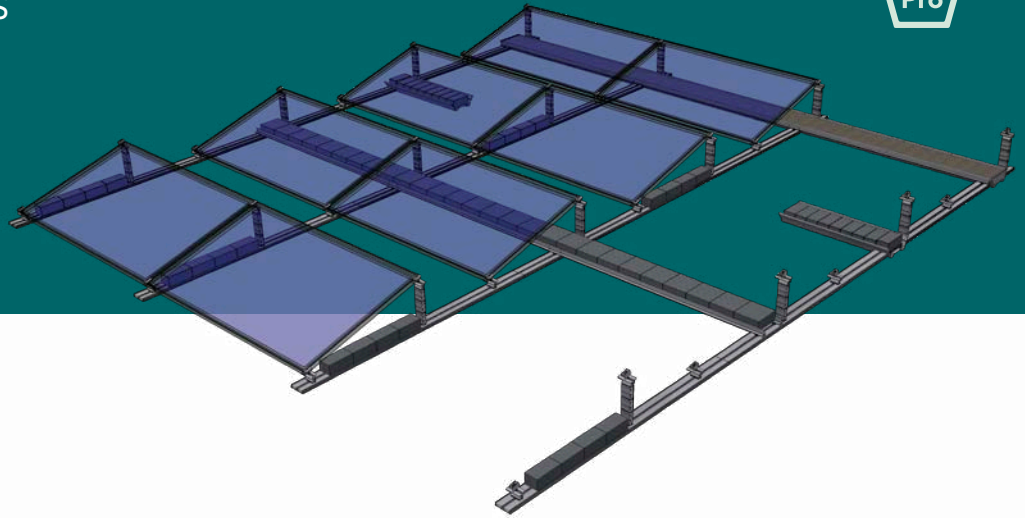


TABLE OF CONTENTS

- 1 General Information..... 2
 - Tools Needed 2
 - Other Documents Required..... 2
 - Tightening Torques..... 2
 - Safety Instructions 2
 - Installation Instructions..... 3
- 2 Versions 4
- 3 Defining base profile lengths and module support spacing..... 6
- 4 Inserting the Pro front screw-in module support 7
- 5 Inserting the Pro screw-in heightening elements 8
- 6 Extending the Pro heightening element 9
- 7 Extending the Pro module support..... 10
- 8 Mounting the surface protection mat 11
- 9 Connecting the floor profile 13
- 10 Aligning the floor profile 13
- 11 Ballasting 14
- 12 Solar module installation 18
- 13 Windsafe Pro installation..... 19

1 GENERAL INFORMATION

TOOLS NEEDED

- Tape measure
- Screwdriver with TX drive T40 bit → *Module installation*
- Screwdriver with SW8 socket wrench → *Windsafe Pro installation*
- Schletter screw-in aid → *Module support installation and screw-in heightening element*
- Screwdriver or SW24 fork spanner to create leverage
→ *Installation of ballast and composite rail using RapidCon90 cross connector*
- Flat pliers → *For ballast version C*

OTHER DOCUMENTS REQUIRED

- General installation manual – installation and project planning
- Installation manual RapidPro module clamps
- Product sheet FixGrid Pro
- Project-related planning and ballasting documents

TIGHTENING TORQUES

- Screw connections M8: 15 Nm
- Use of self-drilling screws: stop-oriented

SAFETY INSTRUCTIONS



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.



Hazard area! Prior to installation, set up barriers to warn people who are in the vicinity.

INSTALLATION INSTRUCTIONS



Roof pitch and securing against slipping: Due to thermal linear expansion, so-called caterpillar effects can occur. It has to be checked in each individual case whether an additional fixation to prevent slipping is required. We recommend a basic fixation from a roof pitch $> 5^\circ$. In some circumstances, fixation should be carried out for minor slopes.



Thermal separation of the module blocks must be ensured.



The system must only be installed with ballasting according to the planning documents. The required ballasting and related planning documents can be determined in the Schletter Configurator.



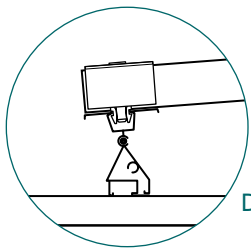
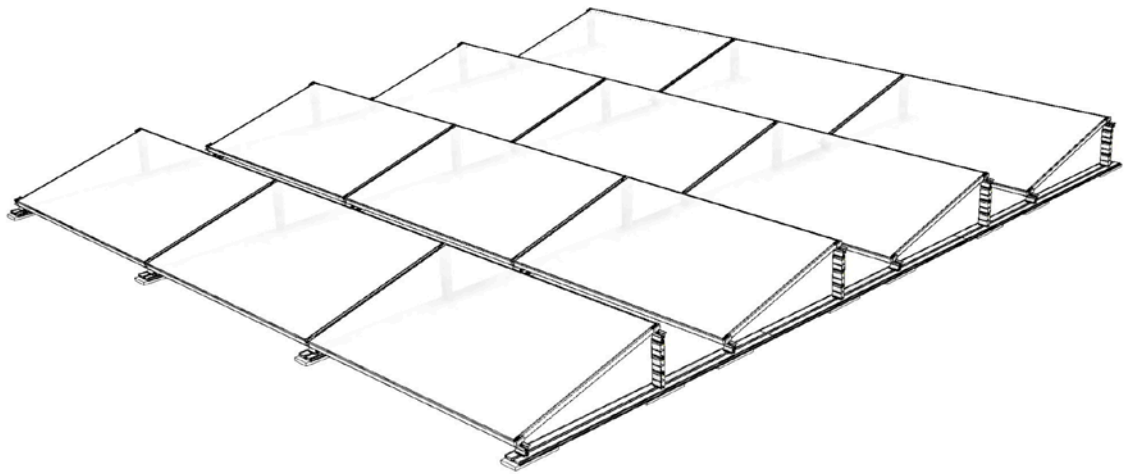
Check that the existing roofing has been adequately fixed.



Sufficient roof cover must be checked on site.

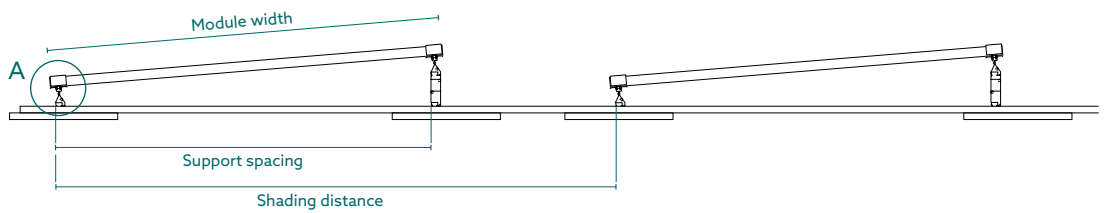
2 VERSIONS

LANDSCAPE

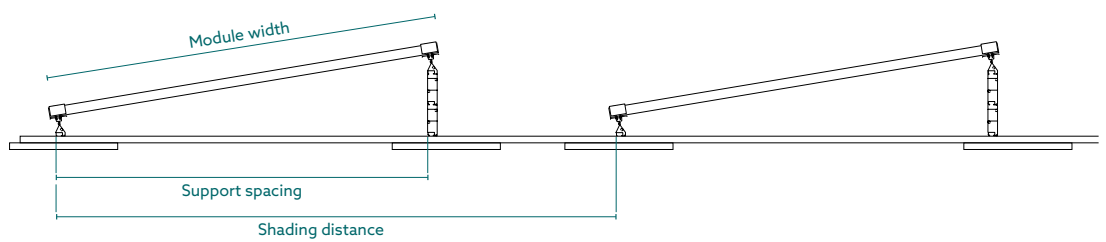


Detail A

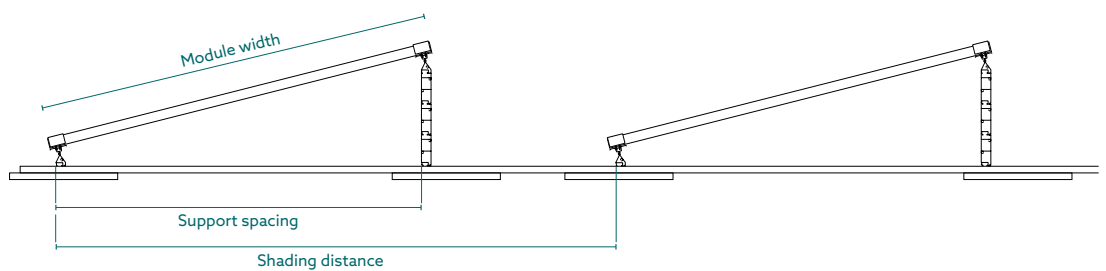
Version 5° Landscape



Version 10° Landscape

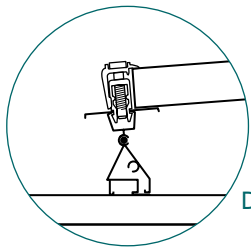


Version 15° Landscape

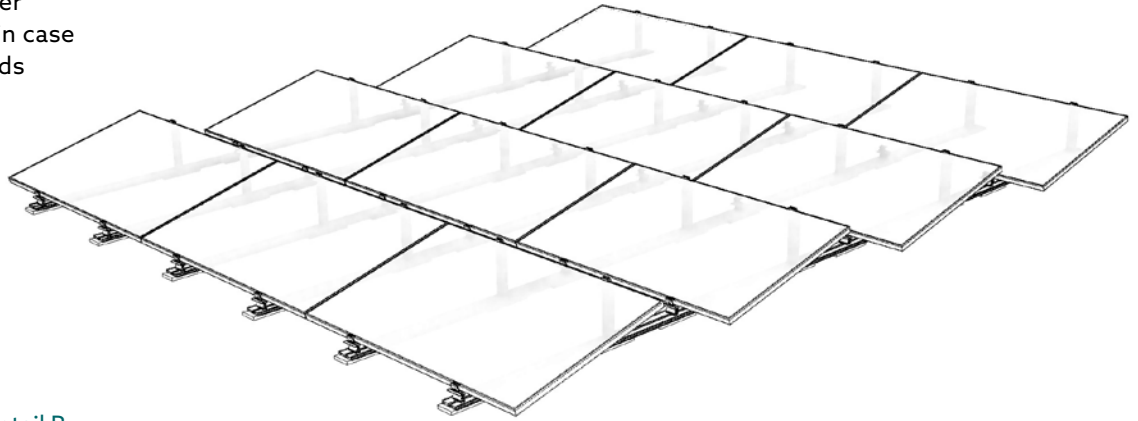


LANDSCAPE PLUS

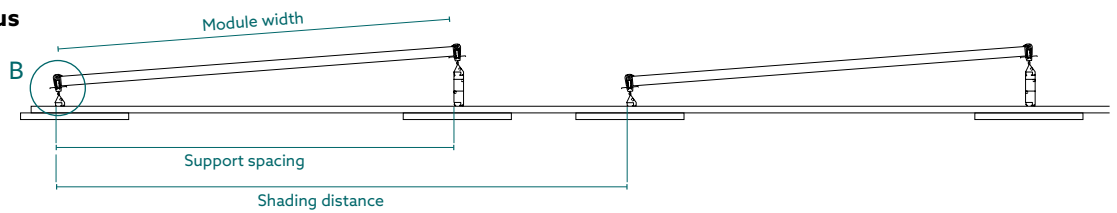
Clamping at the quarter point of the modules in case of increased snow loads



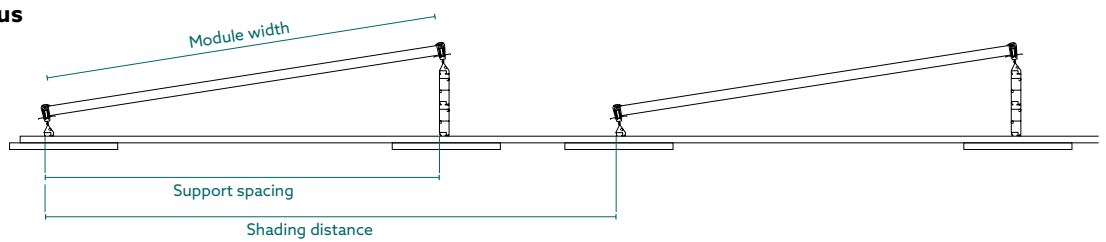
Detail B



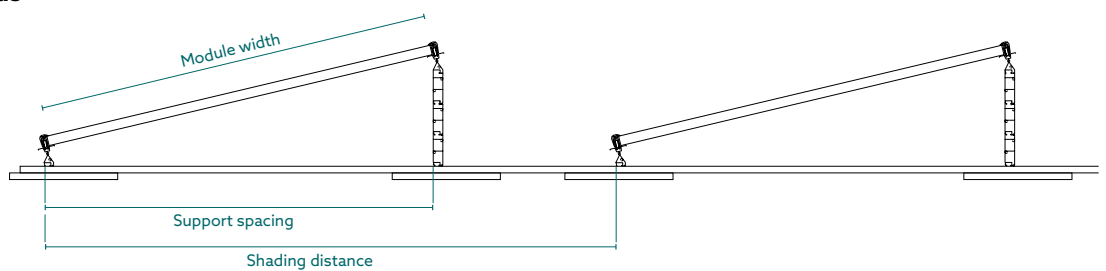
Version 5° Landscape Plus



Version 10° Landscape Plus



Version 15° Landscape Plus

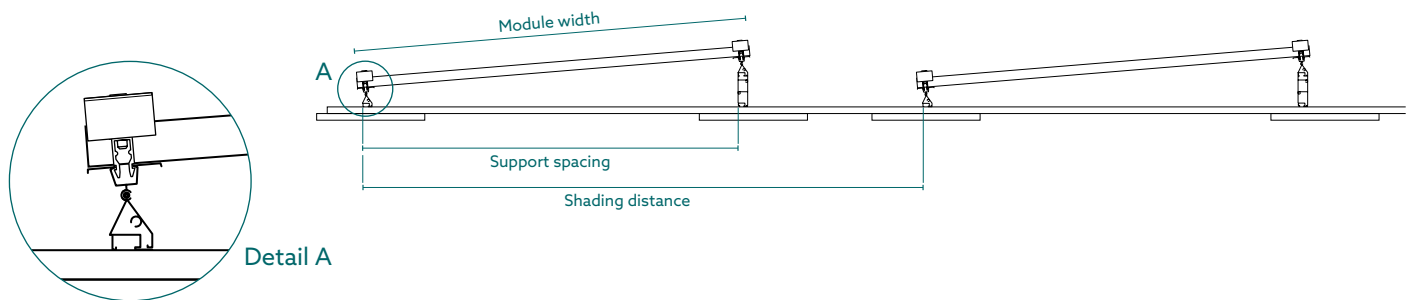


3 DEFINING BASE PROFILE LENGTHS AND MODULE SUPPORT DISTANCES

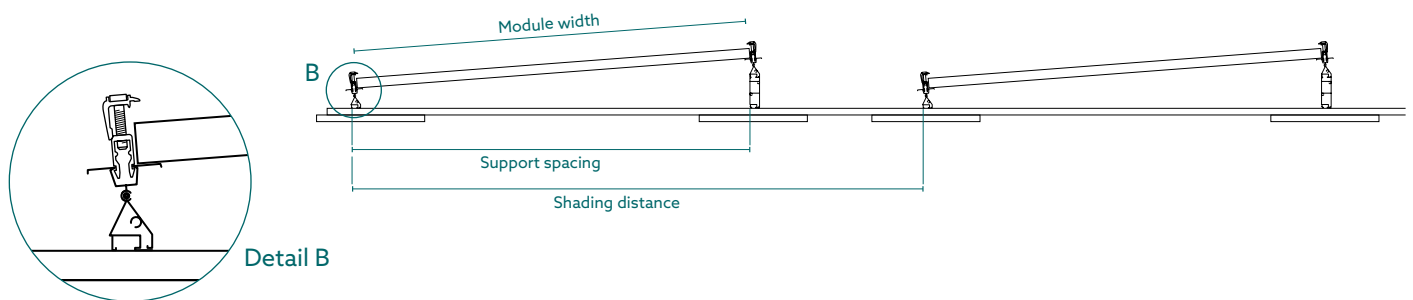
The distances of the heightening and support elements depend on the module size and are shown accordingly in the project-related structural analysis report.

! The modules are to be clamped **flush** at the upper and lower module support.

LANDSCAPE

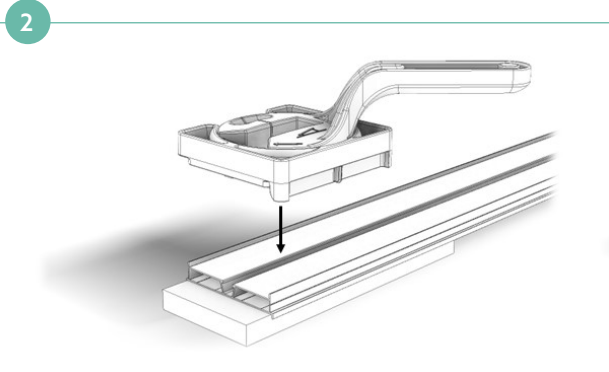


LANDSCAPE PLUS

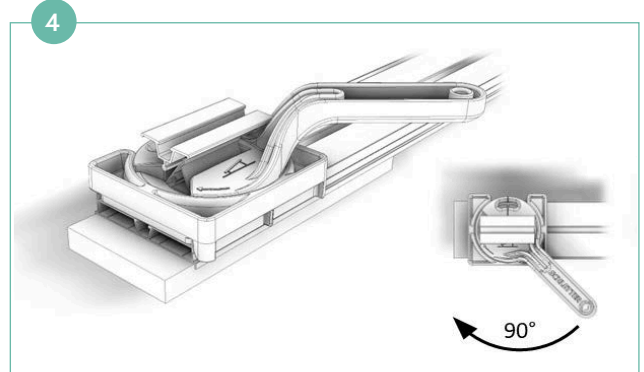


4 INSERTING THE PRO FRONT SCREW-IN MODULE SUPPORT

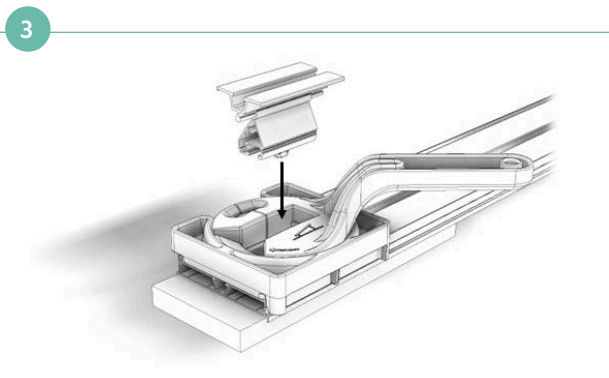
- 1 Mark position according to planning documents



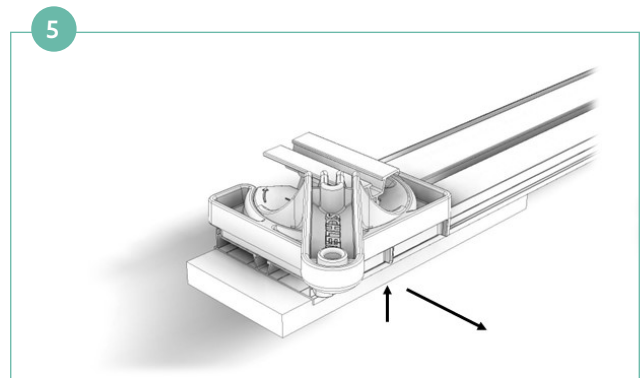
Place screw-in aid in position on the base profile



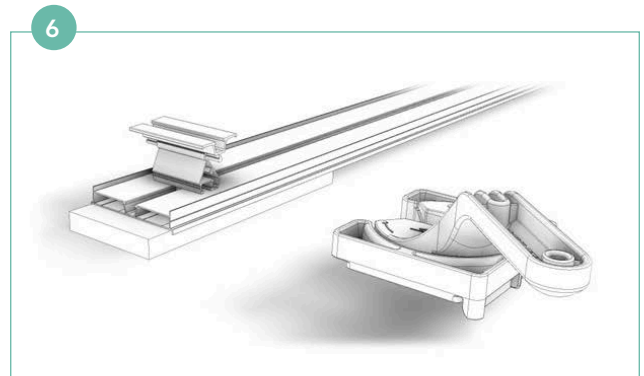
Turn the screw-in aid 90° clockwise



Insert Pro module support parallel to Pro base profile in assembly aid (insert pressed-in screw-in connector into click channel)



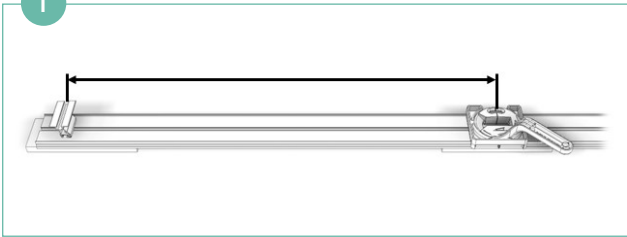
Lift the screw-in aid slightly



Pull the screw-in aid sideways off the base profile

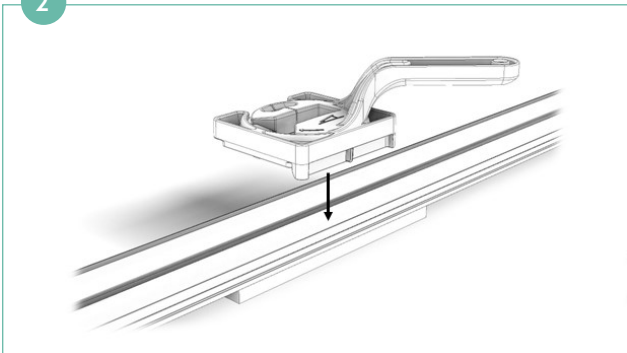
5 INSERTING THE PRO SCREW-IN HEIGHTENING ELEMENTS

1



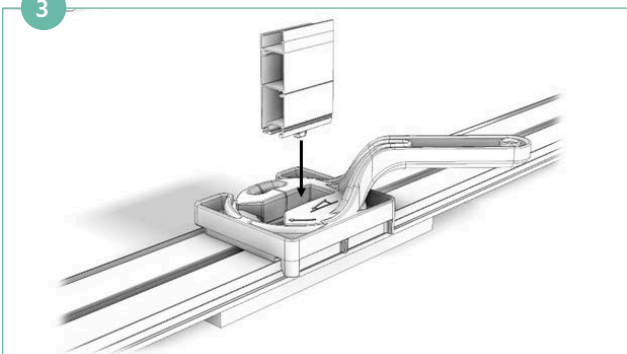
Determine the distance to the screw-in module support according to the assembly instructions (see chapter 2)

2



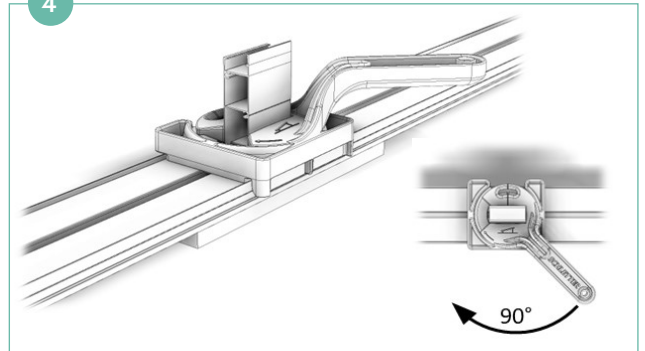
Place screw-in aid in position on the base profile

3



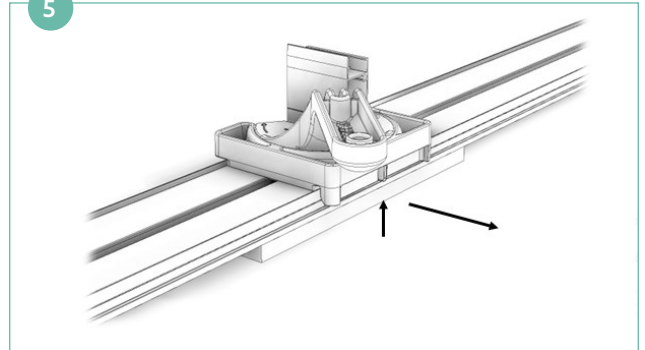
Insert Pro module support parallel to Pro base profile in assembly aid (insert pressed-in screw-in connector into click channel)

4



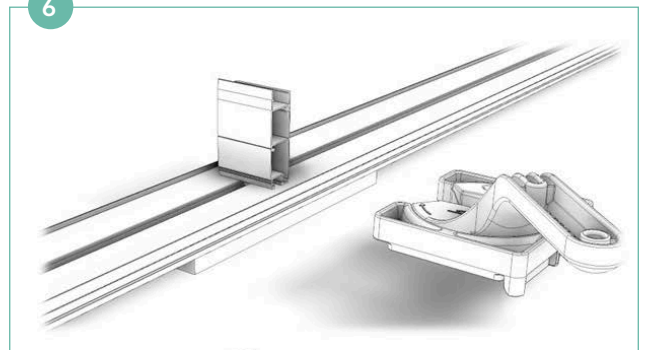
Turn the screw-in aid 90° clockwise

5



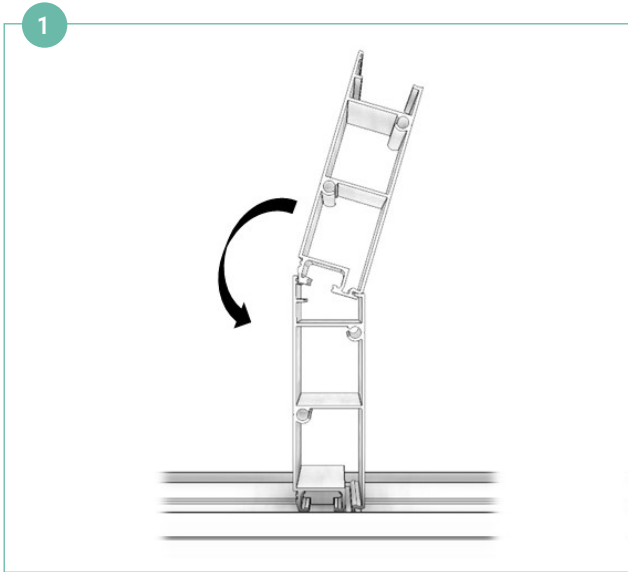
Lift the screw-in aid slightly

6

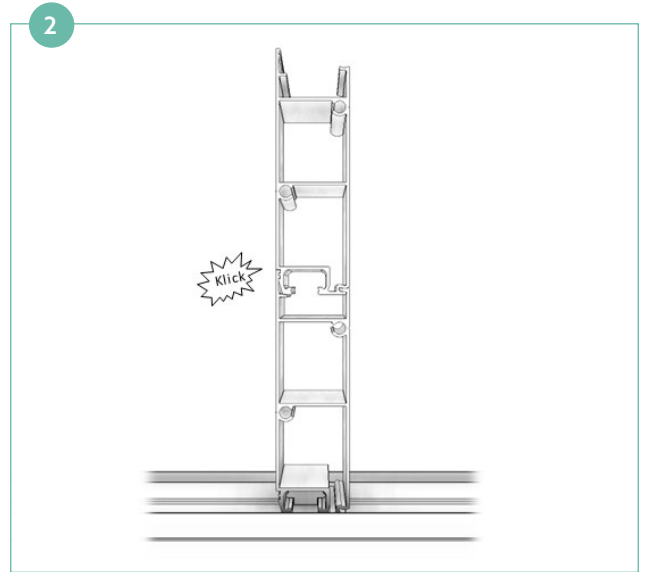


Pull the screw-in aid sideways off the base profile

6 EXTENDING THE PRO HEIGHTENING ELEMENT

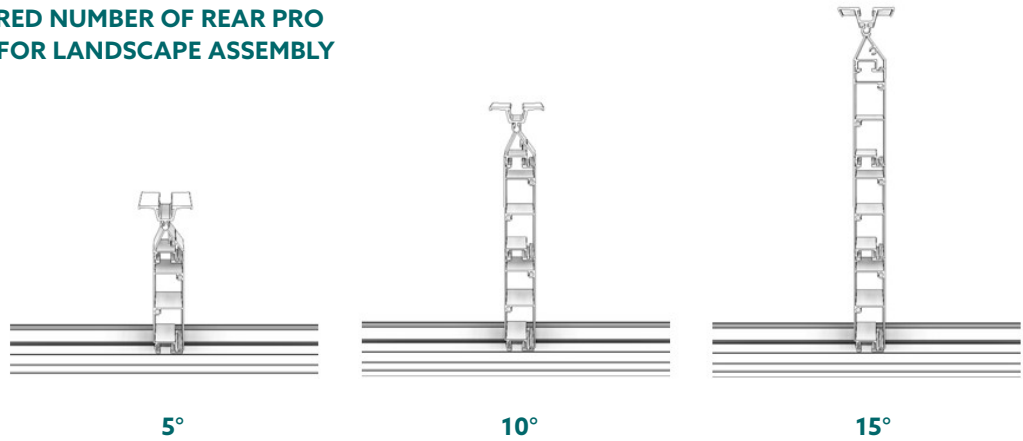


Fit Pro heightening extension element on existing slightly inclined element (short side to short side - groove to right-angled arm)



Click in on long side

OVERVIEW OF THE REQUIRED NUMBER OF REAR PRO HEIGHTENING ELEMENTS FOR LANDSCAPE ASSEMBLY

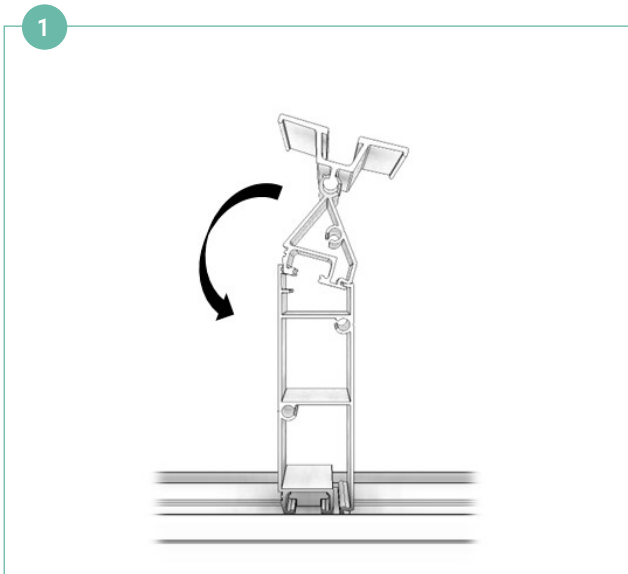


	5°	10°	15°
Pro module support	1	1	1
Pro heightening element	-	1	2
Pro screw-in heightening element	1	1	1

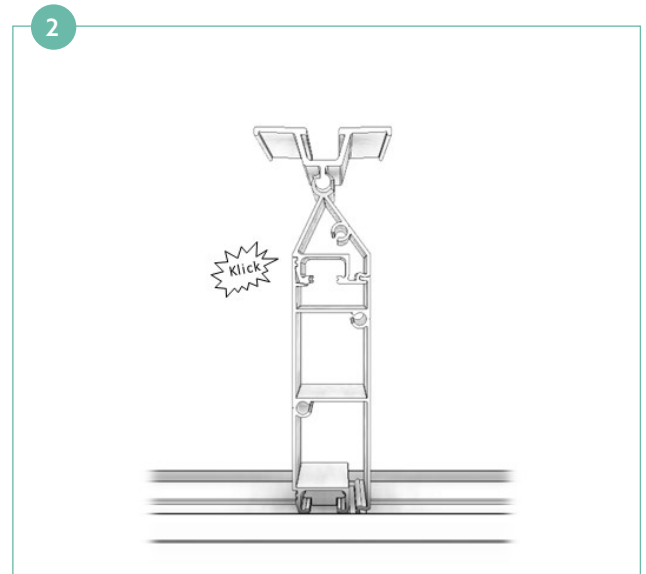


The Pro screw-in heightening element can also be used instead of the Pro heightening element. The Pro screw-in module support can also be used instead of the Pro module support.

7 EXTENDING THE PRO MODULE SUPPORT



Place Pro module support on Pro heightening element at a slight angle



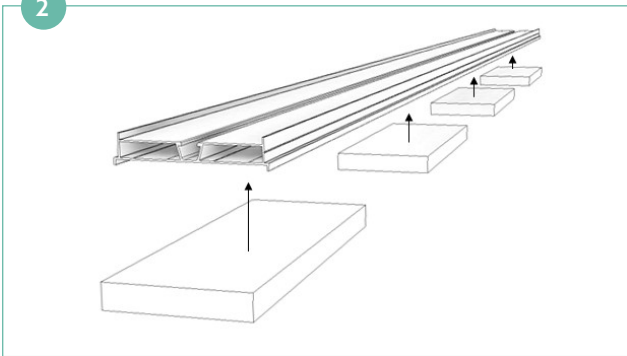
Click in on long side

8 MOUNTING THE SURFACE PROTECTION MAT

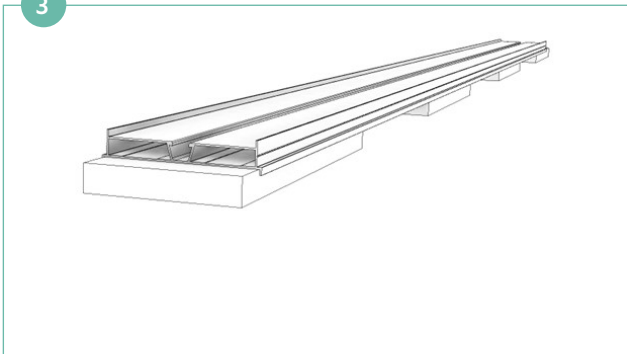
! The surface protection mats have an aluminium lining to protect against softener transfer with the roofing membrane. The aluminium lining is to be placed downwards.

1 Peel off the adhesive foil on the upper side

2

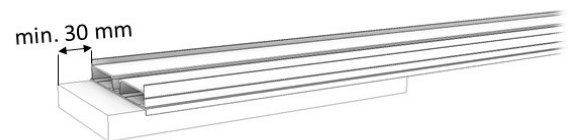


3



Press it to the bottom of the base profile at the desired position

! A projection of 30 mm must be maintained at the beginning and end of the block





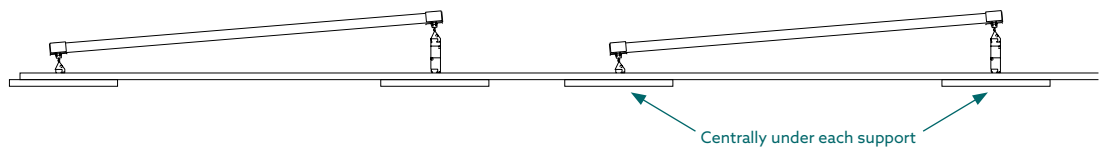
Info on positioning: As a general rule, the surface protection mat is to be placed under each module support.

Please check the maximum permissible surface pressure of the insulation installed on site.

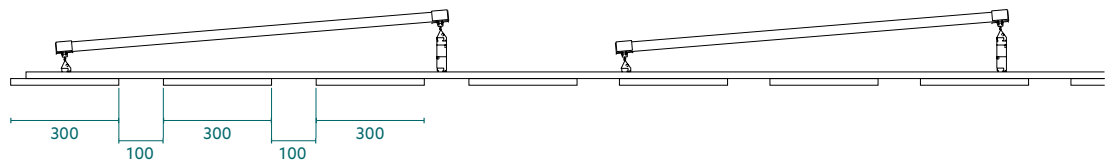
Further surface protection mats can be fitted to reduce the surface pressure.

A 10-cm gap between the mats must be maintained to ensure the flow of rainwater.

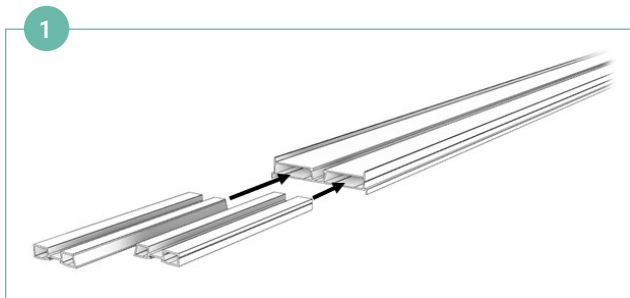
Standard version:



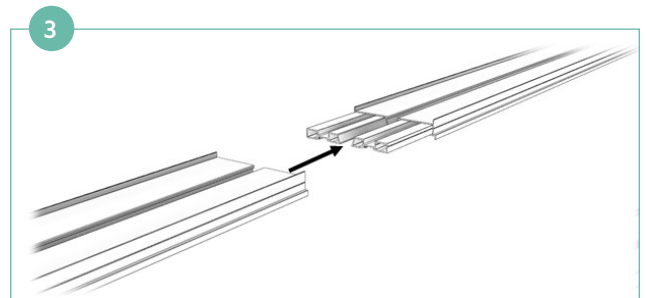
Version with reduced surface pressure:



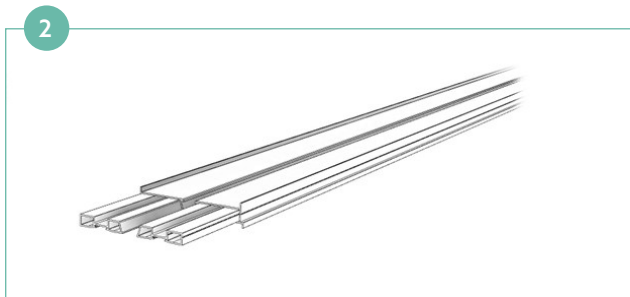
9 CONNECTING THE FLOOR PROFILE



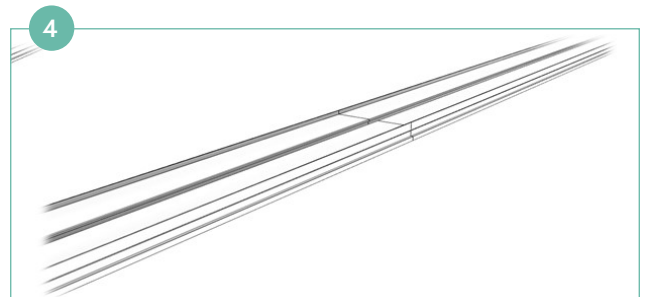
1 Insert internal connector into profile on both sides



3 Connect the second floor profile.



2 Align centrally



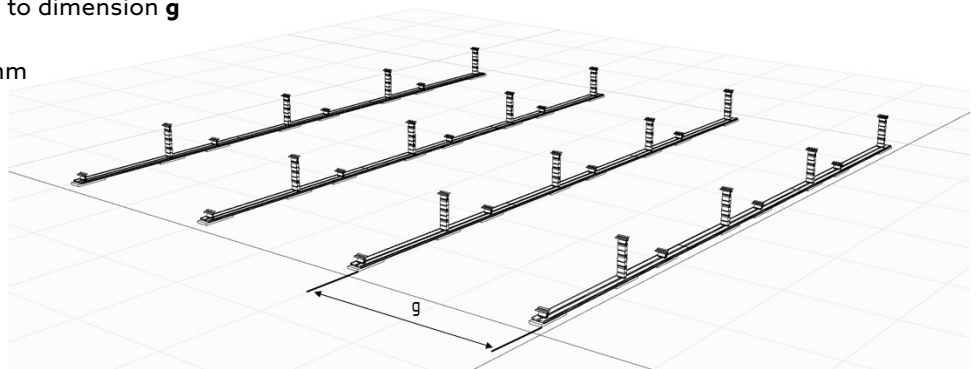
4 Bring up to the joint

! For increased loads, the internal connector must be additionally secured laterally through the floor profile with drill screws. If necessary, this will be taken into account in the Schletter configurator.

10 ALIGNING THE FLOOR PROFILE

1 Position profiles according to dimension **g**

$$g = [\text{module length}] + 23 \text{ mm}$$



11 BALLASTING



During development with the Schletter Configurator, the planning is designed in such a way that the ballast is initially to be placed exclusively on the floor profiles (**Version A**).

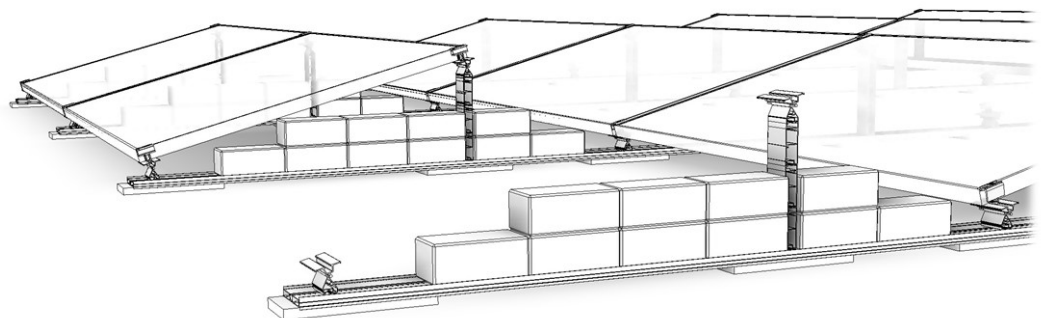
Additional ballast profiles are only planned to accommodate the ballast in areas where the required ballast is higher than the space under the photovoltaic modules (**Version B**). The ballast plan of the Schletter Configurator shows where additional ballast profiles are required.

In addition, the use of a gravel bed is possible (**Version C**).

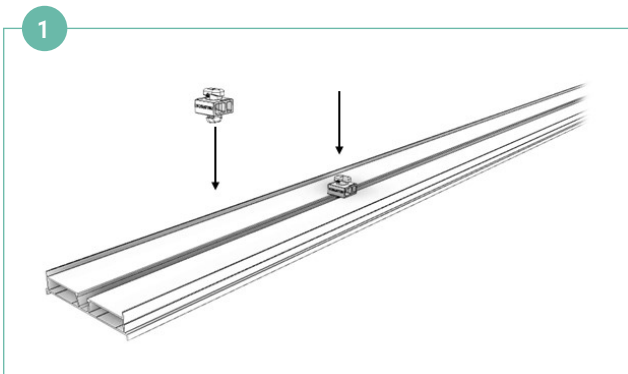
VERSION A: PLACING THE BALLAST BLOCKS ON THE FLOOR PROFILE

1

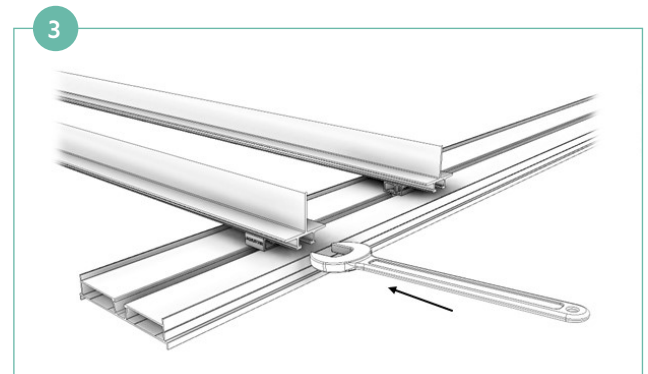
Place ballast blocks (e.g. 20 * 10 * 8 cm - l * w * h) lengthwise in floor profile.



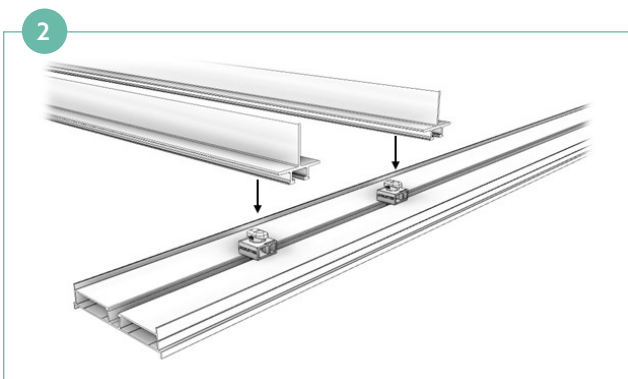
VERSION B: ATTACHMENT OF BALLAST PROFILES



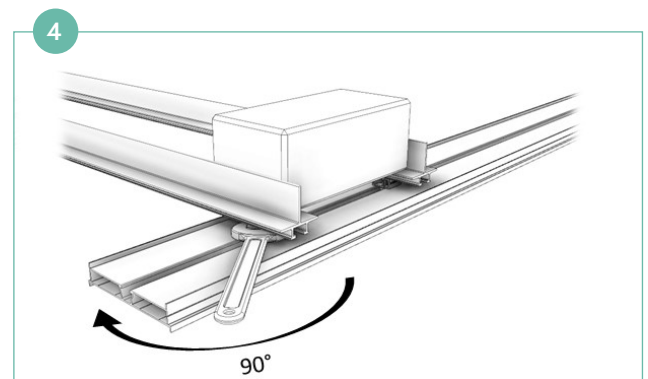
Place the RapidCon90 cross connector at the connection points of the floor profile to the ballast profile in the click channel of the floor profile



Position SW24 fork spanner on RapidCon90 cross connector and turn 90° clockwise

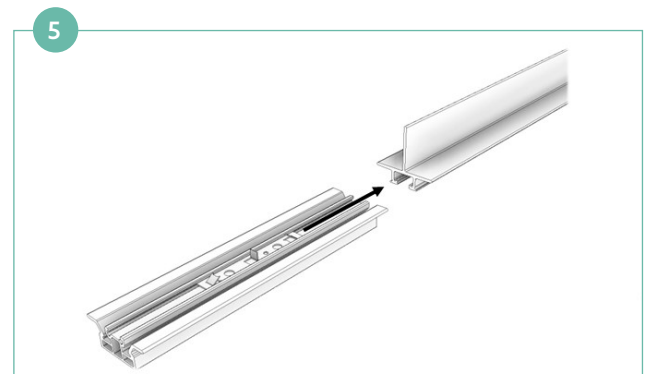


Attach floor profiles to RapidCon90 cross connectors

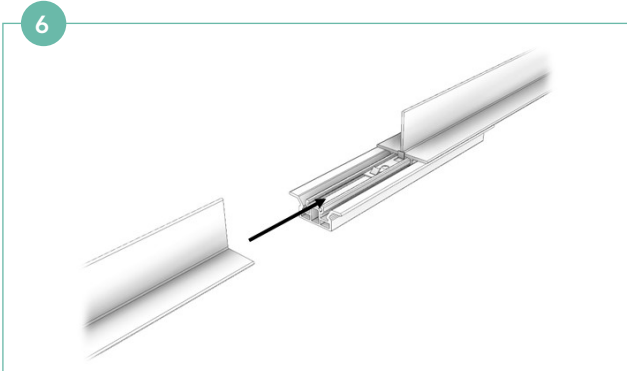


! A screwdriver can also be used to create leverage for installing the RapidCon90 cross connector.

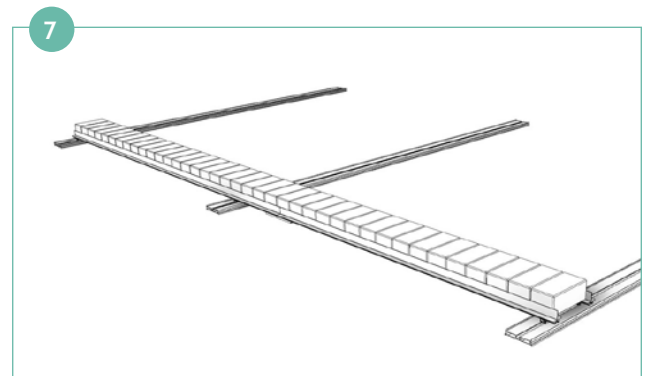
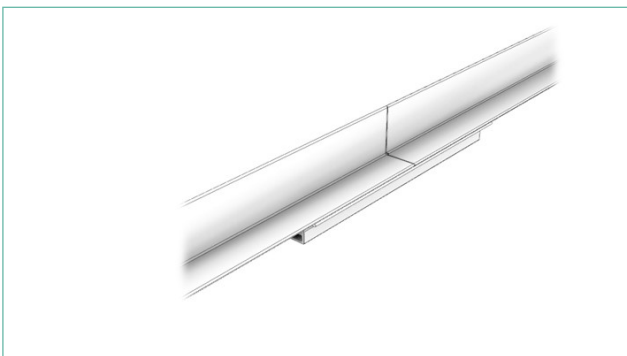
- 3 Insert first ballast block to determine exact positioning of the ballast profiles
(The ballast blocks are to be moved up to the vertical bar of the ballast profile)



Slide in connector ballast profile up to vertical bar of self-locking lug



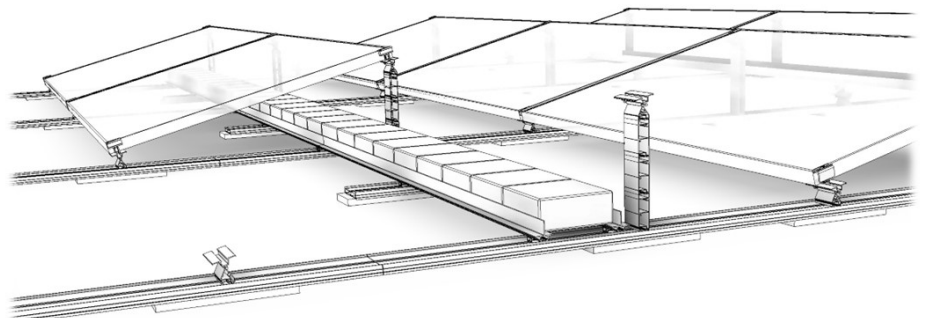
! Connecting the ballast profiles on the floor profile is not possible. This must be done in the open space between the floor profiles.



Place remaining ballast blocks

Slide in the second ballast profile up to the vertical bar of the self-locking lug

! Under certain circumstances an additional support must be installed centrally under the ballast profiles. This consists of a floor profile section and a surface protection mat.

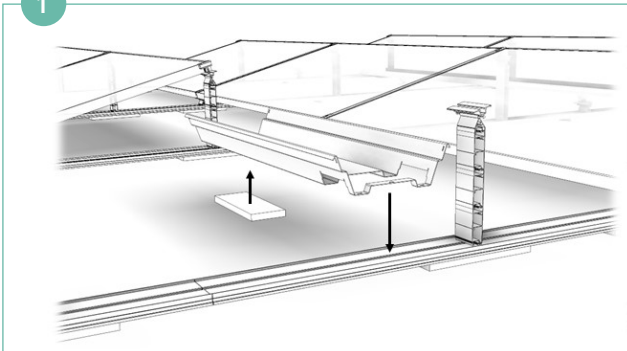


CENTRAL SUPPORT

	Floor profile spacing	
	0 - 2.000 mm	2.000 - 2.500 mm
Ballast between profiles < 100 kg	✗	✗
Ballast between profiles 100 - 150 kg	✗	✓
Ballast between profiles > 150 kg	✓	✓

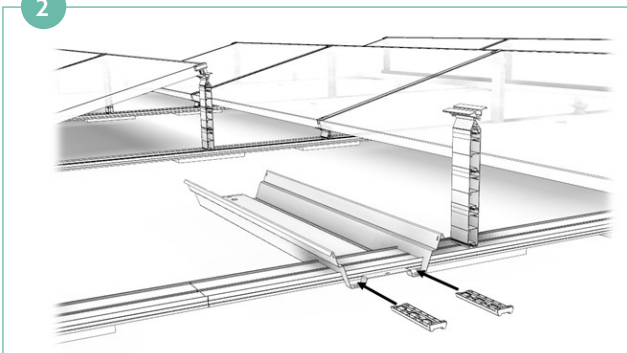
VERSION C: USE OF THE PRO BALLAST TRAY IN ORDER TO USE THE GRAVEL BED

1



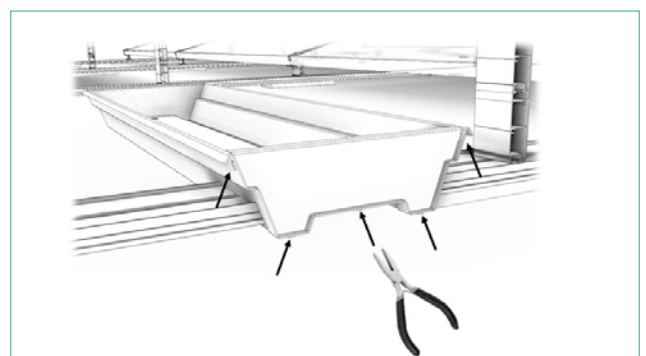
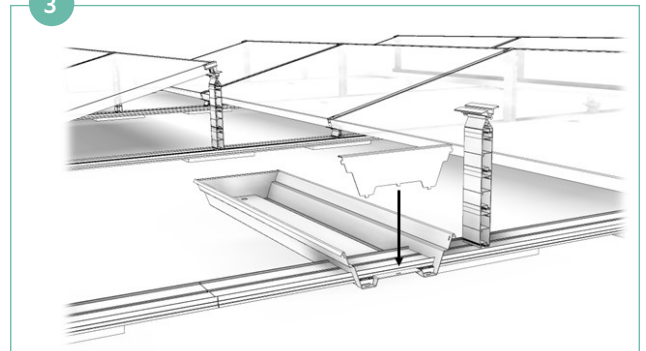
Lay out the Pro ballast tray on an additional surface protection mat and with the notch placed on the floor profile

2



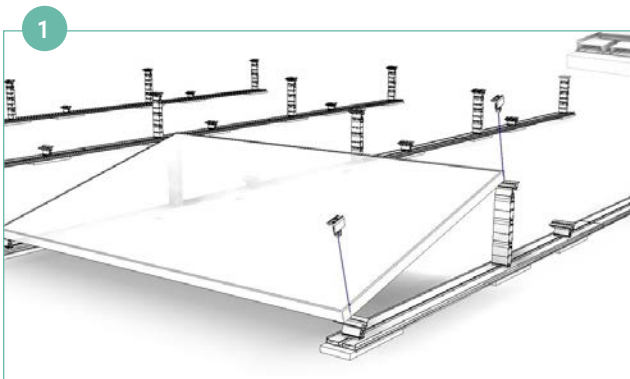
Slide two clamping wedges between the lowest support of the Pro ballast tray and the floor profile

3

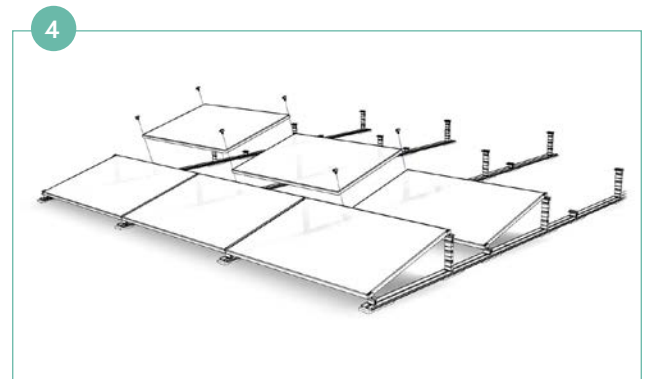


Insert the end sheet metal of the Pro ballast tray and bend the bars with flat pliers

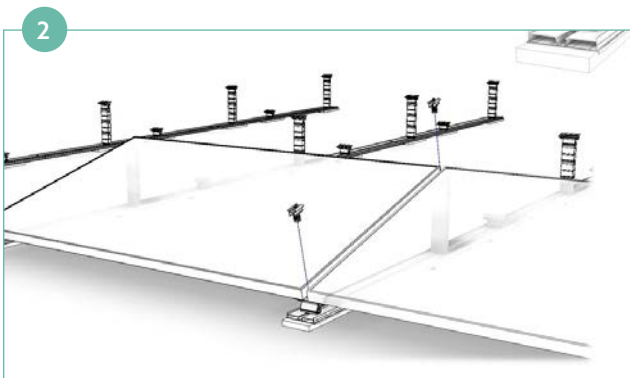
12 SOLAR MODULE INSTALLATION



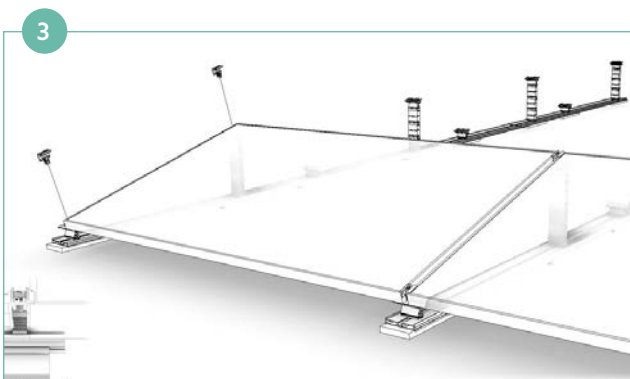
Place and align first module,
Click in 2 end clamps and tighten screws
(connect module cables as required)



Repeat steps 1-3 for the other rows



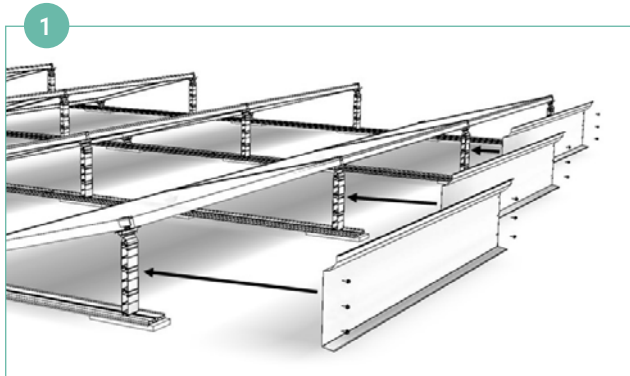
Click in 2 centre clamps, put on further
modules and fasten them



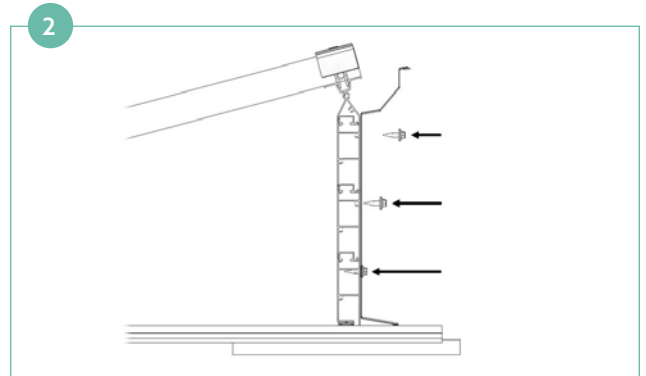
Fix the last module of the respective row with 2
end clamps, making sure that the clamp is in contact
with the frame

13 WINDSAFE PRO INSTALLATION

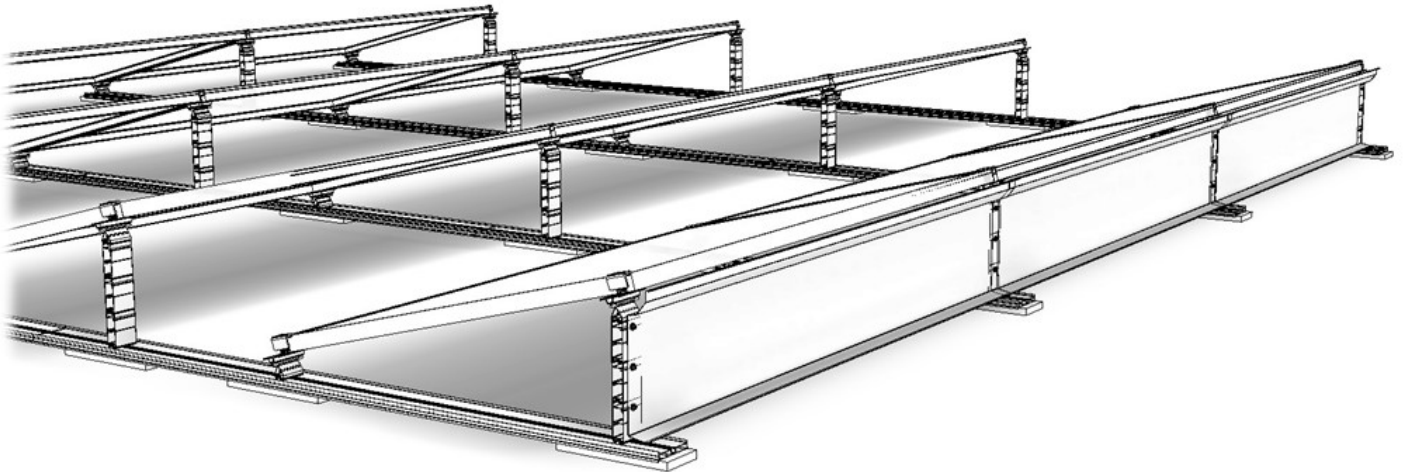
! Windsafes are generally only required in ballasting zones A and B. Please refer to the project-specific planning to determine the number of Windsafe Pros required.



Position Windsafe Pro on rear module support



Fix Windsafe Pro with thin sheet metal screws



! For more information on our systems, please visit our website: www.schletter-group.com > Services > Downloads