contec

Assembly Instructions
Contec.greenlight

Version march 2024

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Technical information

Contec.greenlight base plate	1980 x 980 x 60 mm
Weight per unit	12 kg, weight without load, without PV module
Material	Rec.-HDPE, Magnelis, aluminum and steel galvanized
Water storage volume	39.5 liters, unfilled
Compressive strength	Unfilled compressive strength:> 25 kN / m2 Compressed strength filled (flush fill):> 70 kN / m2
Water drainage capacity	i = 0.01 (= 1% gradient) 0.4 l / (m * s) i = 0.02 (= 2% gradient) 0.6 l / (m * s) i = 0.05 (= 5% gradient) 1.0 l / (m * s)
Standard module inclination	10 °, 15 °, 20 ° standard (optional)
Roof connection	No constructive roof connection necessary
Ballasting	Ballast and distance base plate must be calculated by Contec AG according to the wind zone plan.
Roof pitch	Inclination up to 5° approved, from 5°: Release only with technical clarification by Contec AG.
Unit consists of	1 x Contec.greenlight base plate 1 x Knickfix 2.0 m to 3.4 m profile rail Small material (screws, profile connectors, clamps)
Warranty	10 year system warranty on Contec.greenlight substructure ex works, valid from the delivery date

Preparation

Please note:

- The existing roof area or substructure must first be checked in detail for damage, stability and load-bearing capacity.
- The roof surface must be swept clean before installation, i.e. any impurities such as moss deposits or adhering layers of dirt must be removed.
- Detailed planning of the substructure is available from the system planner.

Tools and materials required for the installation

Allen insert size: 5 mm
(S:Flex Module Clamps)

Torx insert size: TX40
(Schletter module clamps)

Torque wrench 15-20 Nm

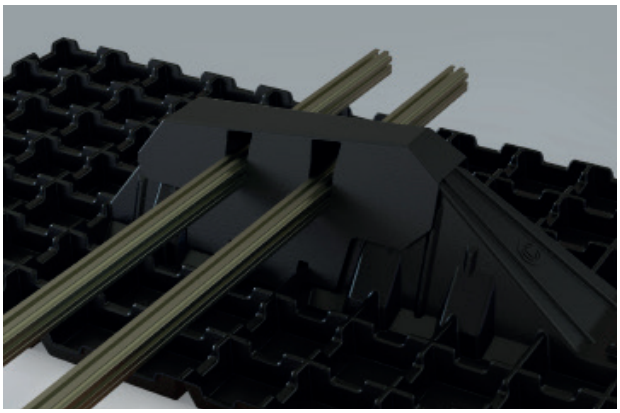
Step 1

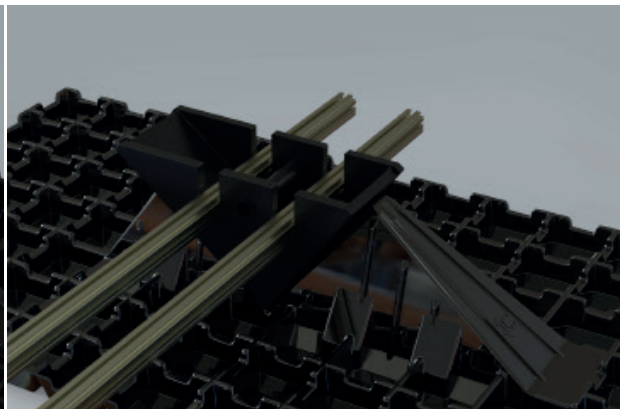
Shy of Contec.greenlight Basisplatte

- Clean the roof surface and make sure that there are no stones or other objects under the Contec. greenlight base plate and that the underside of the base plate is free of dirt.
- Protective layer according to the information provided by the manufacturer of the roof waterproofing.
- Large bumps must be leveled out with appropriate building protection mats or later taken into account when installing the rails (cut rails).
- Distribute the base plates on the roof area according to the planning. The edge distances must be observed.
- The distance between the base plates can be found in the planning documents. The module protrusion at the beginning and end of a row of modules may be max. 60 cm.

Variant 1 - with mounting aid Alignment of base plates

Use a string to align the base plates. Position the assembly aid on the hump. The profile rail in the mounting aid guarantees the exact positioning of the base plates among each other. This mounting aid can thus be used for positioning each additional module row. In addition, the mounting aid prevents soiling of the threaded sleeve and support of the Knickfix.



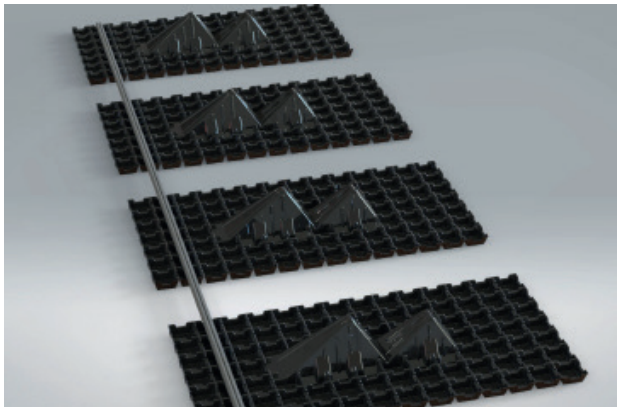


This assembly aid can be purchased or rented. In the case of rental, deposit fees apply and return transportation is subject to a charge.

Variant 2 - without assembly wedges

Align the base plates with a cord. This ensures that the profiles later run in a line.

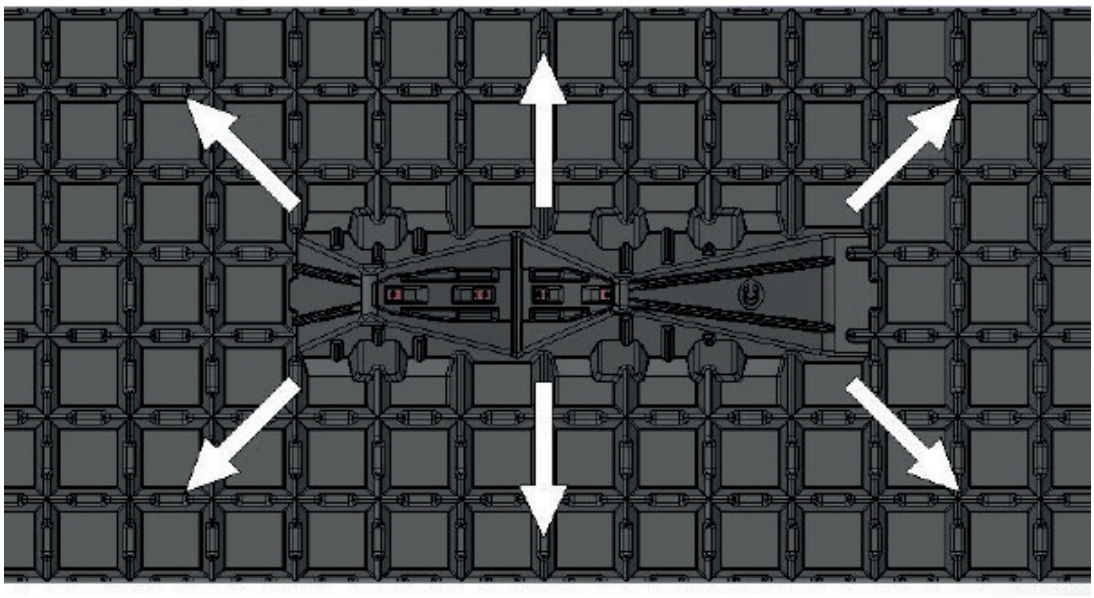
In addition, insert a profile rail into the gaps in the base plate in order to align it.



Step 2

Ballasting the Contec.greenlight base plate

- Fill the base plates with greening substrate.
- The planner of the photovoltaic system must be informed of the exact nature and density of the ballast, as well as the planned height of the ballast, right from the planning s days. This information has a direct impact on the spacing between the trays and filling weight.
- The minimum required filling weight can be taken from the planning.
- Mark the position of the base plate on the substrate.
- The fill should always be applied from the center outward to avoid fill between the base plate and the substrate.
- During the pouring process, check the alignment of the profile rails and adjust the base plate if necessary, as crooked profile rails will later also cause the modules to be out of alignment.



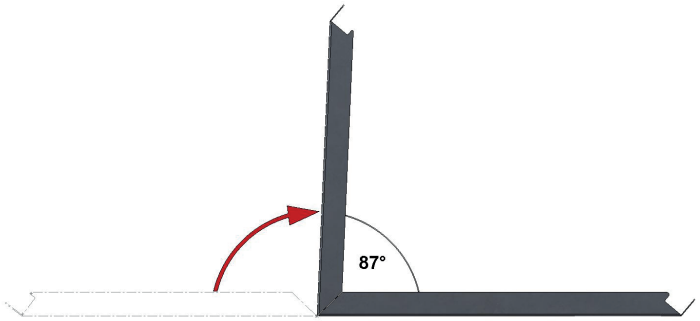
During the pouring process, make sure that no gravel / granulate gets under the base plate, this must be removed if necessary. The threaded sleeves must be kept clean.

During the pouring process, make sure that no gravel/granules get under the base plate; this must be removed if necessary. It is imperative that the clamping nuts are kept clean.

Step 3

Screw in the Knickfix angle bracket

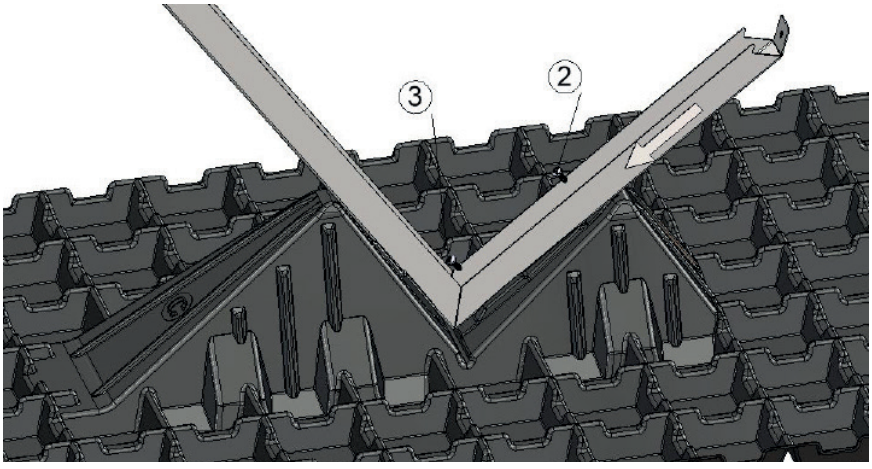
The Knickfix angle bracket is bent by hand to 87°.



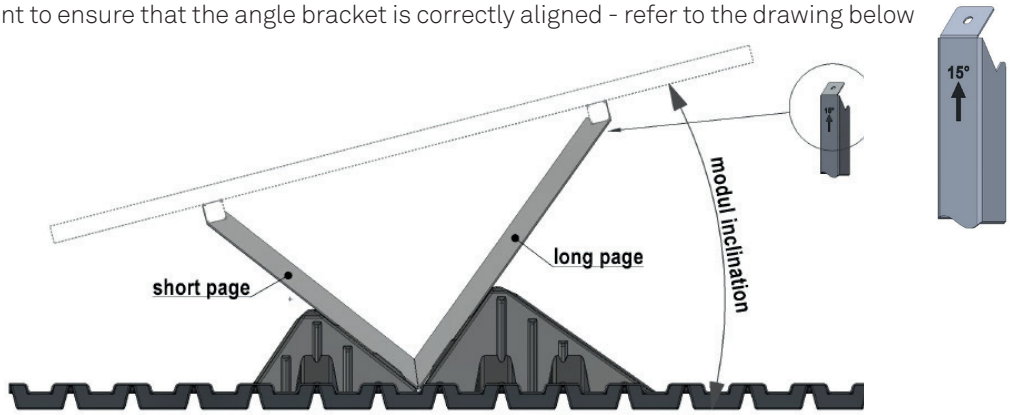
Subsequently, the angle is placed on the base plate and fastened with 4 pcs. pan-head screws 5/16“ - 10 ACME. Position the pan head screws straight and centered to the internal thread of the clamping nut and tighten with the cordless screwdriver (Tightening torque M_A = max. 15 Nm).

The clamping nuts sit loosely in the base plate, so they can be easily aligned.

1. Tighten an upper screw until a small collar is formed between the screw and the profile.
   At the same time, press the angle in the direction of the base plate bottom to ensure that the angle is in full contact with the surface.
2. Tighten the lower screw on the same side.
3. Repeat the same procedure on the other side until all screws (4 pieces) are tightened.



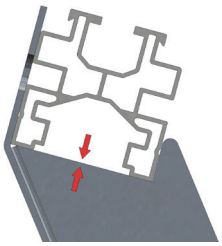
It is important to ensure that the angle bracket is correctly aligned - refer to the drawing below

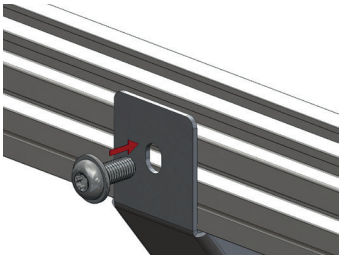


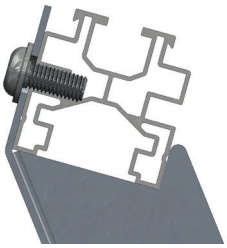
Step 4

Securing the module support profiles

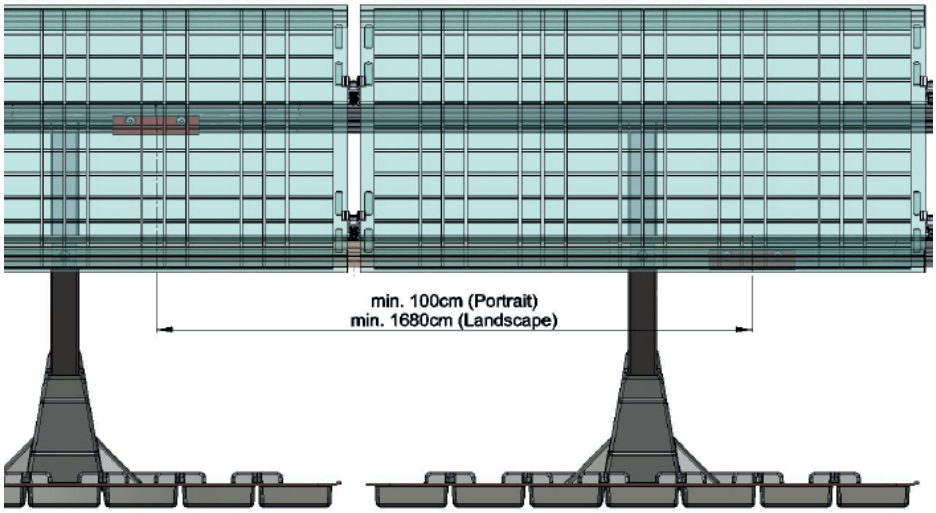
Screw the individual profile rails onto the Knickfix brackets using the M8 x 20 pan-head screws. Without pre-drilling and with the correct torque of the cordless screwdriver, the screws should penetrate the profile wall (with feeling and a little pressure at the same time). Position the screws vertically.

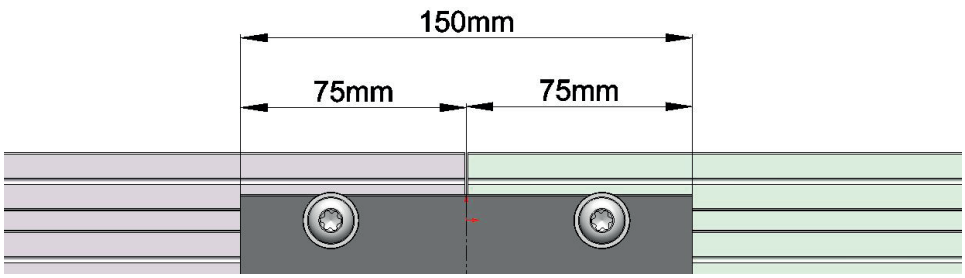






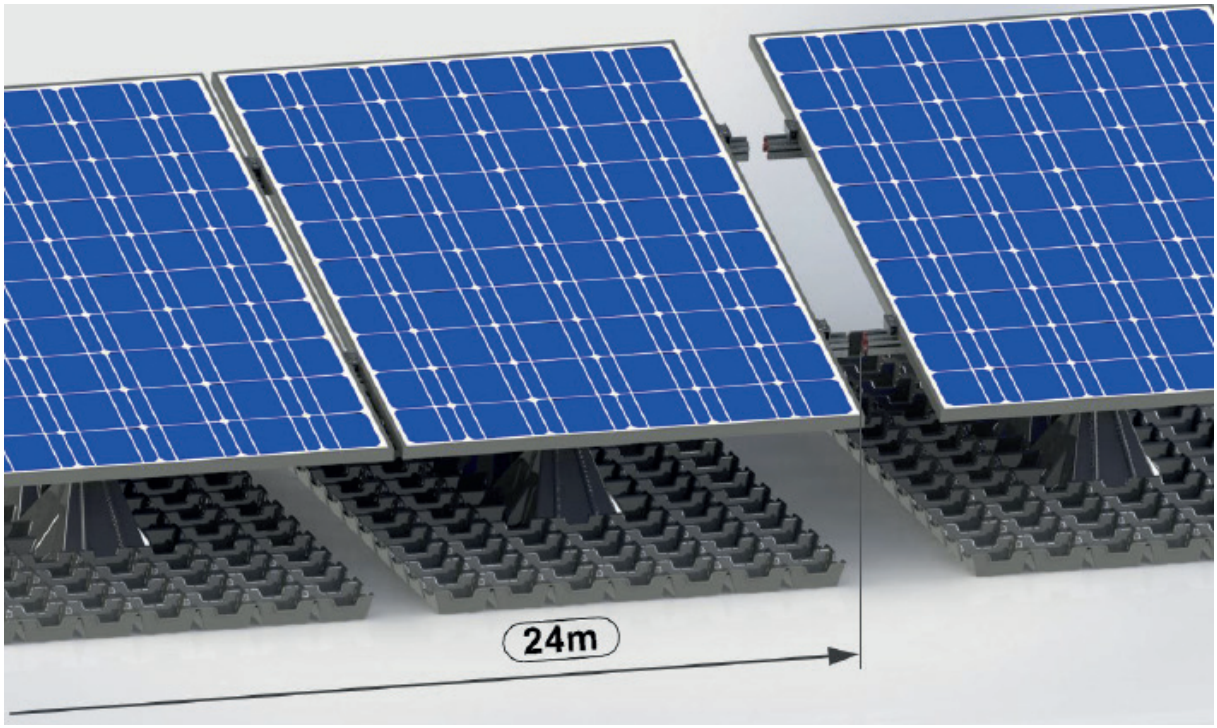
Individual profile rails are screwed together using the L-shaped profile connector and 2 M8 x 20 self-tapping screws.



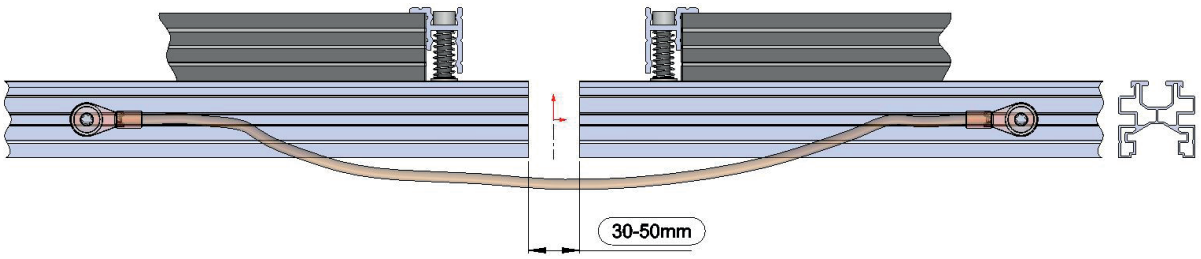


- For profile lengths over 24 m, an expansion joint/termic separation must be integrated. The profiles are interrupted with a separation.
- A distance of 30 mm to 50 mm must be maintained between the two profile rails.

- Important: lightning protection must be guaranteed.



Thermal break/expansion joint

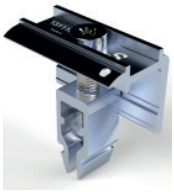


More information

The following points must be observed urgently during assembly

- Only module clamps approved by Contec AG may be used for mounting.
- A suitable torque wrench or a battery wrench with torque limiter must be used to tighten the module clamps. Lower tightening torques can lead to system failure.

S:Flex
Modulklemme
M_A = max. 10 Nm



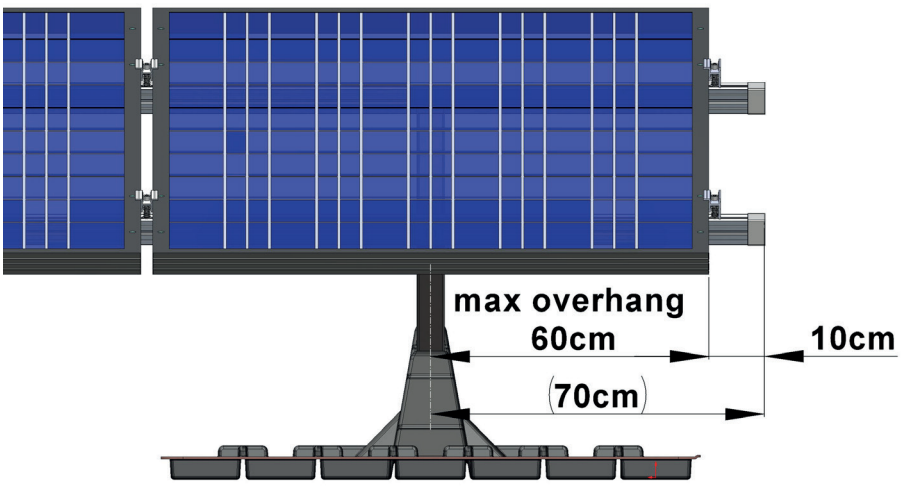
Schletter
Modulklemme
M_A = max. 16 Nm

Laminat
Modulklemme
M_A = max. 16 Nm

- Contact corrosion between module frame and substructure must be avoided when using different materials.
- Do not drill, nail or weld on the module frames.
- Only use corrosion-free screws for mounting.
- Mount the solar modules in the Portrait or Landscape variant with the junction box facing upwards.
- The installation of the modules deviating from the planning by Contec AG, is only permitted after consultation and written approval of the manufacturer.
- In the case of an order, the system statics of Contec AG are taken over by the planning.
- The customer is responsible for the static release of the area to be covered.

Note Laying base plates - module placement

At the beginning and end of the row is allowed a maximum projection of the modules of 60 cm.
Module mounting according to manufacturer.



Lightning protection

- The conductivity of the mounting profile is 34-38 MS/m.
- A lightning-current-capable tape loop must be installed for provil connectors screwed on one side.

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The solution for the EnergyGreenRoof.

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