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Mounting set for flat roof – base plate for sunWin 24

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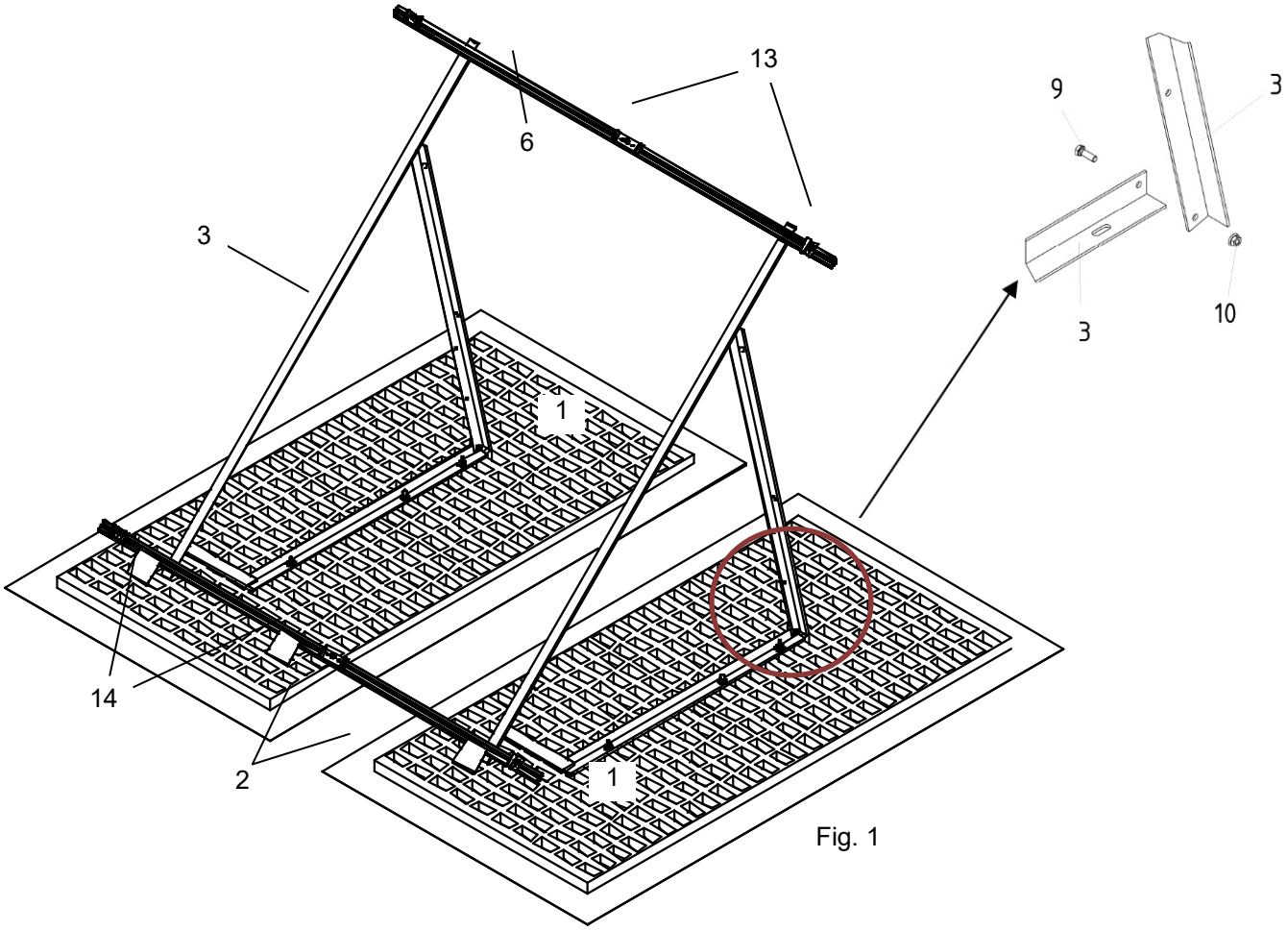

Fig. 1

Pos.	Designation	Items per set
1	Base board of polymer with stiffening profiles	1
2	Protective mat	1
3	Supporting frame vertical / horizontal 40 x 40 x 4 mm	1
4	Disk M10	3
5	Nut M10	3
9	Screw M8x20 mm_V2A	5
10	Nut SS M8_V2A	5
11	Alu strut l = 2280 mm	1
12	Carriage-bolt M8x25 mm_V2A	2

		Number of panels	
Required accessories		**2**	**3**
6	Mounting rail (horizontal) Alu 35 x 35 mm	depending on panel / installation type	
7	Connection piece		
8	Hammerhead-bolt M8x25 mm_V2A		
10	Nut SS M8_V2A		
13	Mounting clamp		
14	Slide-protection	*3 (*)*	*4 (*)*
Mounting clamps			
13a	sunWin 24 … horizontal	1000235702	
13b	sunWin 24 … vertical small	1000235702	
	sunWin 24 … vertical wide	1000230261	
(*) in case of horizontally assembling use 1 pc. slide-protection additionally each			

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1. Determine the position of each single base boards (1) on the roof – considering the given values in the table below. As a guideline the border distance **X** between the “collector edge” and the first or last supporting frame should be in the range of 350 mm (see Fig. 2). Remove the gravel ballasting completely in this area without damaging the roof cladding.

Measurements / Dimensions						
Number of collectors Typ vertical, 24	**1**	**2**	**3**	**4**	**5**	**6**
Supporting frames	2	3	4	5	6	7
GL (mm) rail	1244	2450	3700	4900	6150	7350
W (mm) → see Fig. 2	1000	1000	1023	1050	1090	1108
X (mm) = border distance	122	225	350	350	350	350
Number of collectors Typ horizontal, 24	**1**	**2**	**3**	**4**	**5**	**6**
Supporting frames	2	3	4	5	6	7
GL (mm) rail	2154	4220	6274	8440	10490	12660
W (mm) → see Fig. 2	1454	1760	1858	1860	1898	1943
X (mm) = border distance	350	350	350	500	500	500

2. Place the protective mat (2) below the base boards (1). The base boards have to be adjusted correctly using the three threaded sockets M10 (4 + 5) as illustrated in Fig. 1.

Attention!
Take care that no sharp stones remain below the bearing area!

Fig. 2

Assembling situation, 3 panels in a row

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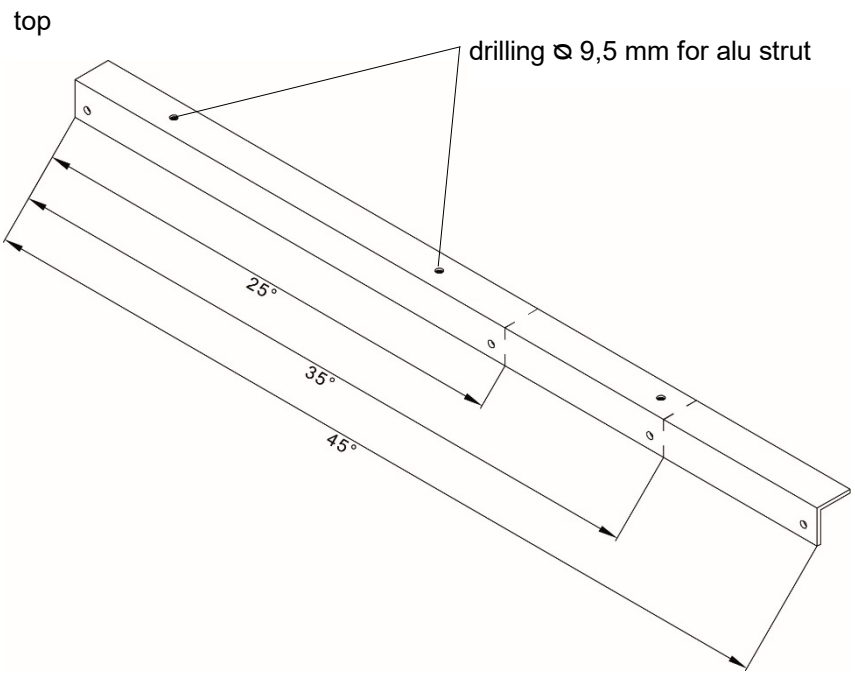
3. Screw each single supporting frame (3) using the screws (9) and nuts (10) as illustrated in Fig. 3.



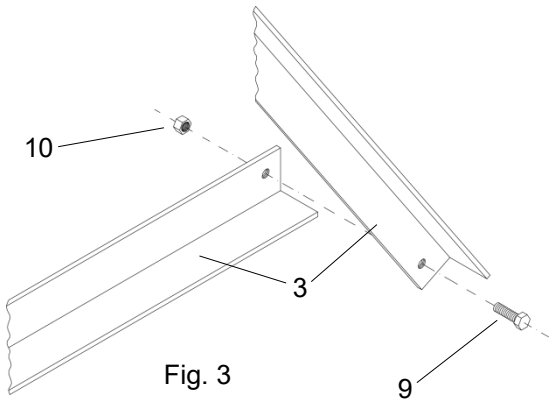


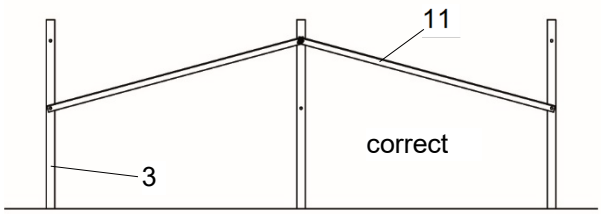
Fig. 3

Fig. 4

4. The rear part of the supporting frame (1) is dimensioned for achieving a maximal inclination of 45°. For achieving the inclinations 35° or 25° the profile can be cut according to the length table given below (see also Fig. 4)!

Length table in mm			
VERTICAL		**HORIZONTAL**	
25°	965	25°	721
30° (optional)	*1070*	*30° (optional)*	*797*
35°	1202	35°	900
40° (optional)	*1303*	*40° (optional)*	*972*
45°	1431	45°	1070

5. The supporting frames (3) have to be mounted in the way that the alu struts (11) can be fixed in the upper part of the supporting frame. It is not allowed to fix the alu struts (11) in the lower part of the supporting frame (Fig. 5, illustration on the right) !



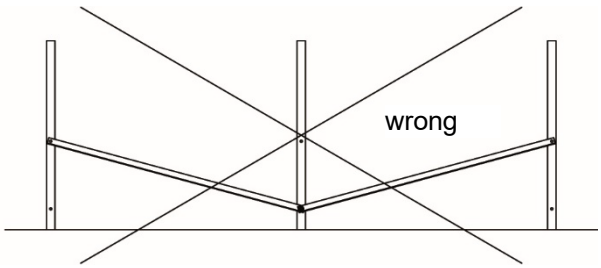


Fig. 5: Example with 6 supporting frames

6. Fix the alu struts (11) in the corresponding drillings of the supporting frame using the screws (9) and nuts (10) (Fig. 6). The required drillings on the alu strut have to be made on site. The first alu strut has to be mounted from the lower drilling of the first supporting frame to the upper drilling of the second supporting frame. The second alu strut has to be mounted from top to bottom.

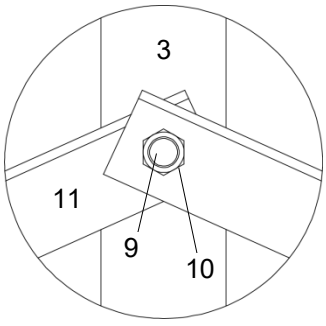


Fig. 6

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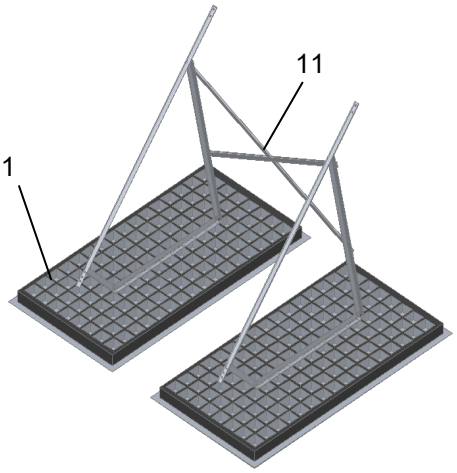
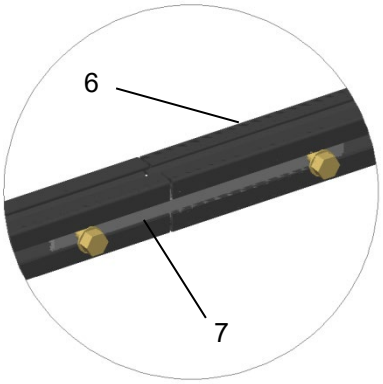
7. Now the base board (1) has to be ballasted with a sufficient quantity of gravel. The distance between the bottom edge of the collector and the gravel ballasting has to be at least 15 cm for ensuring the perfect ventilation of the collector. The base boards must be loaded with a gravel layer of at least 10 cm or with the *statically sufficient value* (gravel with grain size 16/32, density 1.800 kg / m³).
In particular, the standards EN 1991-1, DIN 1055 resp. ÖNORM M7778 must be considered (statically calculation) !

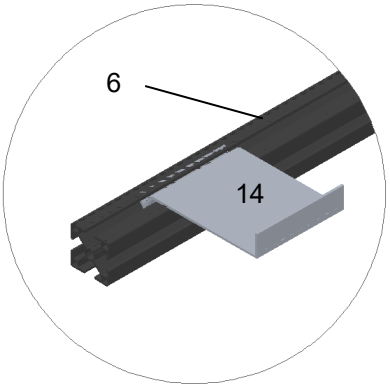


8. **Installation of the panels:**
Fix the mounting rails (6) on top and bottom using the carriage-bolts (12) and the nuts (10) on the diagonal part of the installation racks (supporting frames).



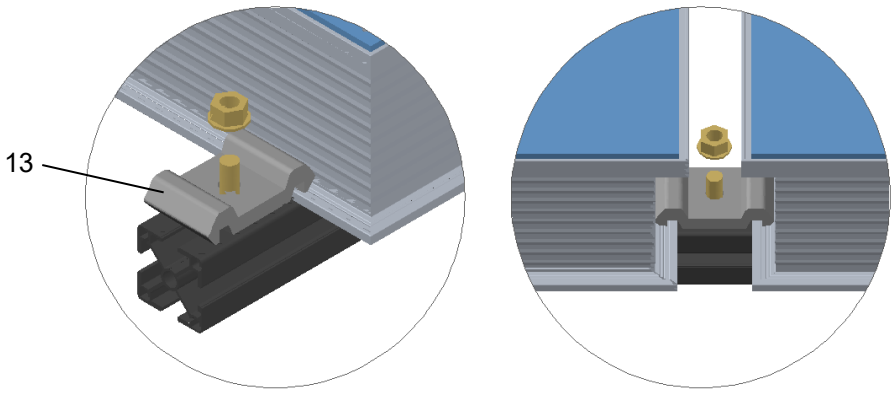
In case of several mounting rails (6) in a row a connection-set (7) must be fixed with screws in the profile of the rails (Fig. 7).

9. Put the slide-protection (14) into the mounting rail at the bottom (6) (Fig. 8). In the next step put the panels on the construction. The panel frame fits closely to the slide-protection. At least fix the panels with the clamps (13) by means of hammerhead-bolts (8) and nuts (10) at the mounting rail sideways 2 times on top and bottom.



The mounting clamps (13) have to be placed according to the panel type as follows:

a.) sunWin 24 … horizontal



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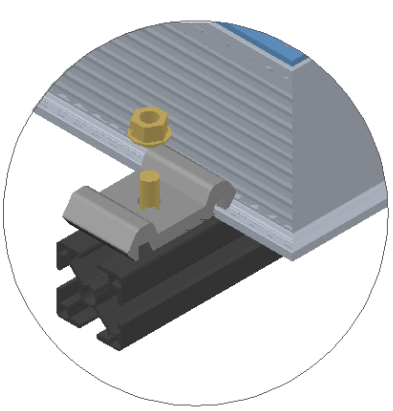
b.) sunWin 24 … vertical



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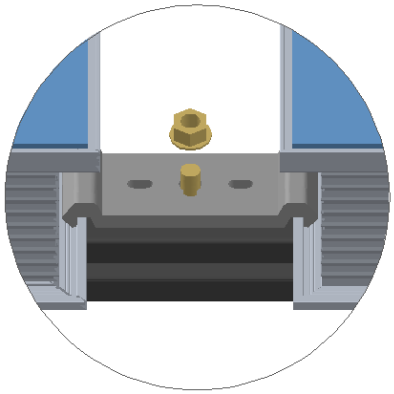
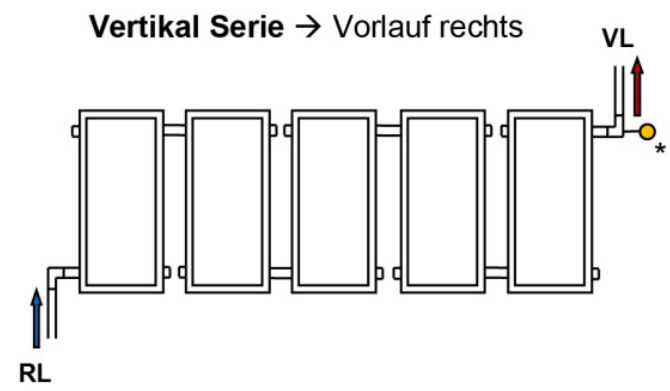
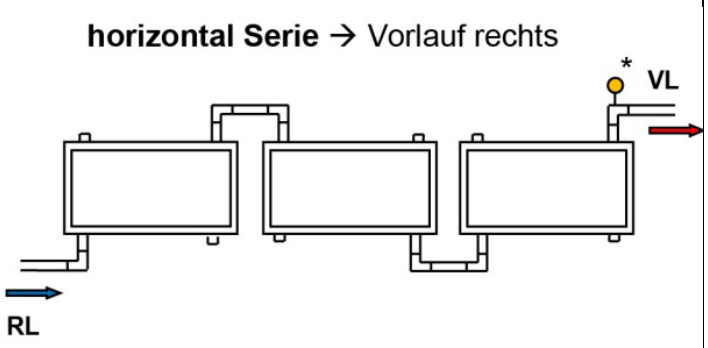
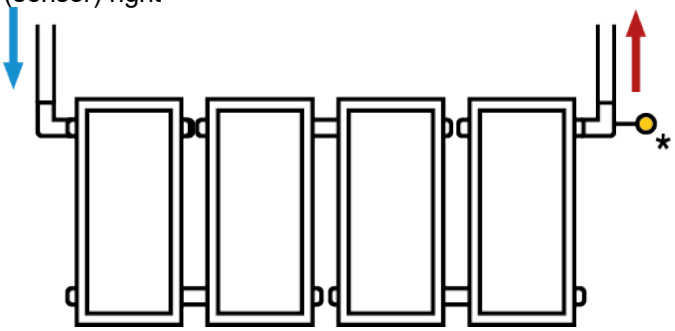
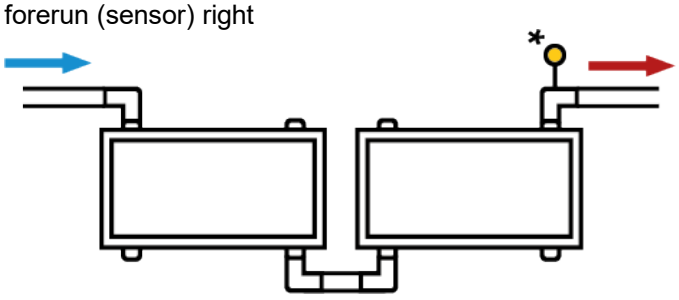


wide

The hydraulic connection between each panel is made by a clamp ring screwing (as a Set, accessories). First, tighten them using 2 open-ended spanner to obtain the proper distance between the panels.

NOTE! Before screwing of the compounds have the treads and the sealing surface are greased (e.g. silicone milk). It's necessary to pull against while screwing otherwise the collecting pipe could be rotated !!!

<u>recommended interconnection-schemes:</u>

sunWin 24 vertikal → fo- rerun (sensor) right  	sunWin 24 horizontal → forerun (sensor) right 
sunWin 24 → forerun (sensor) right  	sunWin 24 horizontal → forerun (sensor) right 

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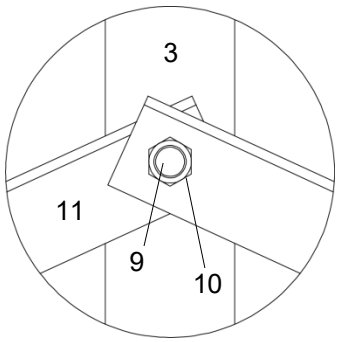
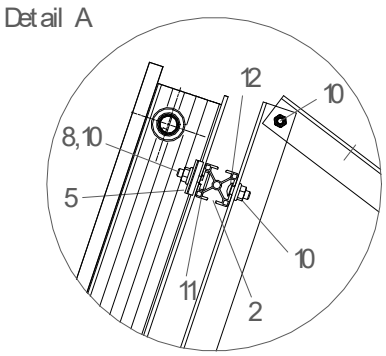
10. Check finally that the clamps (13) and screws (8), (9), (10) and (12) are fastened accurately on the construction as in the Figures nearby illustrated.





ATTENTION!
All bolts and nuts for weight-bearing connections have to be tightened with a calibrated torque handle. The torque table can be found in the „Safety and installation manual for flat plate collectors“.