

DP-DTHBN CONSTRUCTION ASSEMBLY INSTRUCTIONS



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Steel structure for flat roof in ballasted version.

Mounting of PV panels in a horizontal arrangement (horizontally).



1. Necessary tools for assembling the structure

- Allen spanner (ampoule spanner) size 6
- Cordless screwdriver with speed and torque control
- Hexagon socket wrench, hexagon size 6 for screwdriver head
- Combination spanners in sizes 13, 15, 17 mm
- Ratchet spanner with sockets in sizes 13, 15, 17 mm
- Extension piece 100-120mm for socket spanners
- Rubber mallet
- Torque spanner, range 10-45 Nm

2. General information:

- Structures can be used in wind and snow zones in accordance with the following standards: **EN 1991-1-3** and **EN 1991-1-4**
- **Before assembling the structure, please read the installation instructions for the photovoltaic panels.**
- Wartości balastu określone indywidualnie przez konstruktora z uprawnieniami
- Tighten **SAM8x...E** screws and **NKWSM8A** nuts to a torque of 12-14 Nm
- When tightening the **SGKFM8x20** and **SGKFM10x20PV** screws, hold the head of the screw in such a position that the underlay locks onto the walls of the hole in which the screw is installed, and then tighten the screw slowly with a screwdriver until it locks into the hole. At the final stage, tighten the screw with the screwdriver successively to a torque of: M8 - 22 Nm; M10 - 42 Nm.
- Tighten **SMM10x...F** screws to a torque of 30 Nm

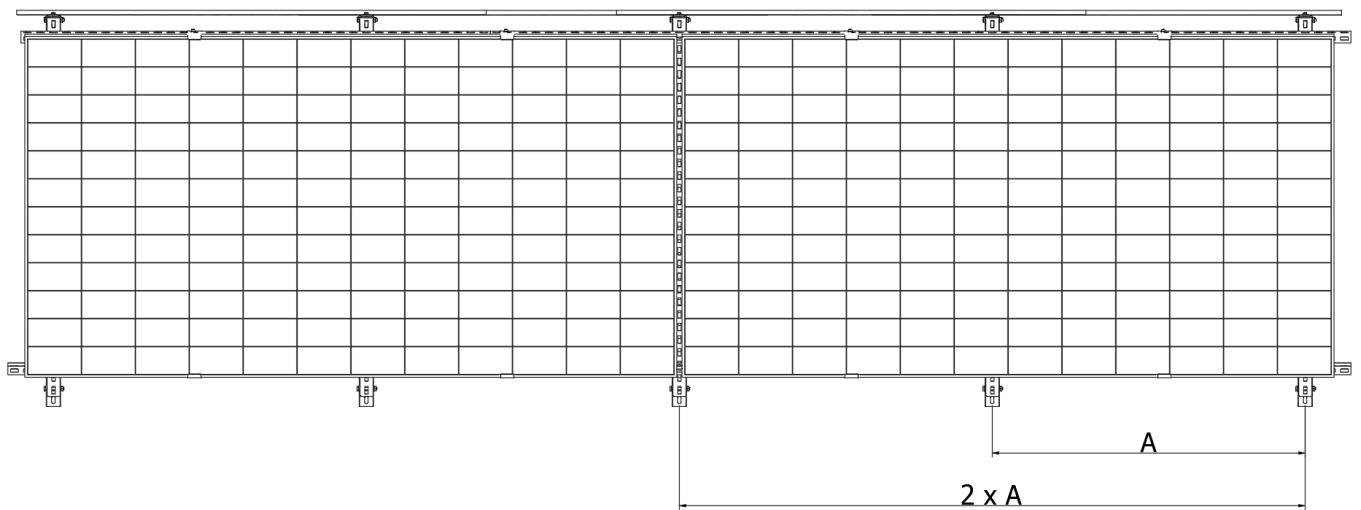
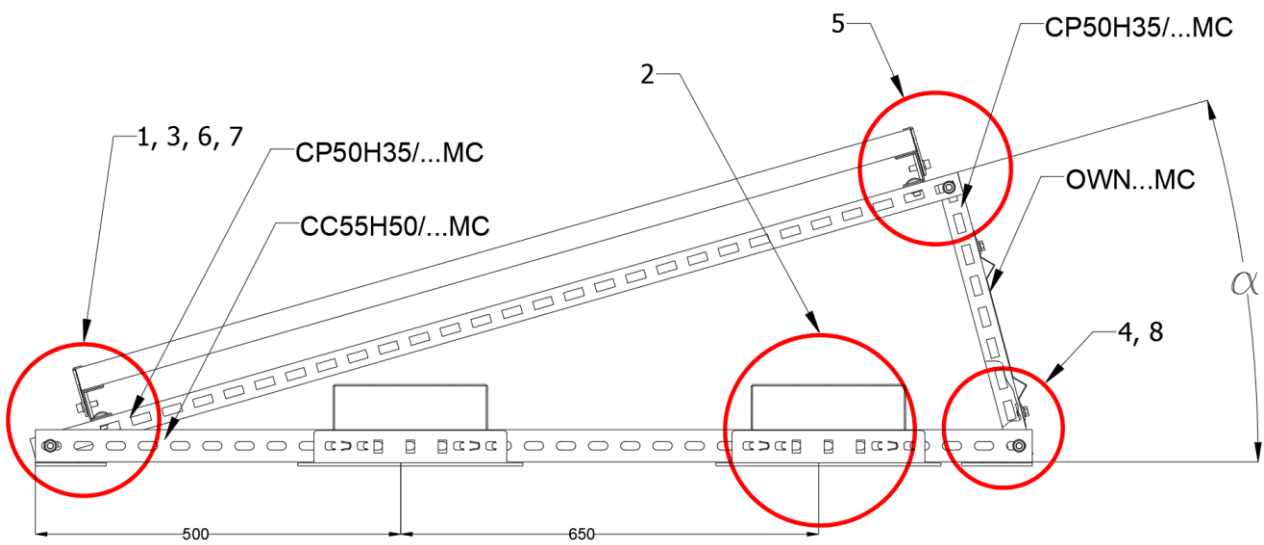


3. Summary of components of the DP-DTHBN construction

No.	Product	Name of product	Designation in construction
1	Channel	CC55H50/...MC	Main profile
2	Channel	CP50H35/...MC	Structure assembly profile
3	Channel	CC50H35/...MC	Panel support profile
4	Channel connector	LCCW50H35MC	Connecting channels CC50H35/...MC
5	Hexagonal head screw	SMM10x70F	Screw connecting the supporting channels of the structure
6	Washer	PP10F	Washer
7	Side holder	BUFMC	Panel mounting holder
8	Screw	SAM8x25E	Mounting screw for holders and wind shields
9	Rhomboid nut	NRKM8PV	Rhomboid nut
10	Wind shield	OWN...MC	Wind shield
11	Hexagonal head screw	SMM8x16F	Connecting wind shields
12	Spring washer	PS8E	Spring washer
13	Enlarged washer	PW8E	Enlarged washer
14	Mushroom head screw	SGKFM10x20	Screw + flange nut
15	Ballast base	PBK50MC	Ballast base
		PBKD500MC	Ballast base for increased ballast capacity (optional)
16	Vibration-insulating rubber	SBV250x350	Separation between the elements of the substructure and roof sheathing
17	Channel base with vibration insulating rubber	PC100C	Prevents pressing of the steel profiles endings against the roof sheathing



4. Assembly of DP-DTHBN construction



Combination of wind "W" and snow "S" * zones	Maximum distance of subsequent "A" frames
1W-1S; 1W-2S; 1W-3S	2,0 m
1W-4S	1,8 m
2W-2S; 2W-3S	1,4 m
3W-1S	1,6 m
3W-3S	1,3 m
3W-5S	1,1 m
Other combinations of zones	Selected individually after consultation

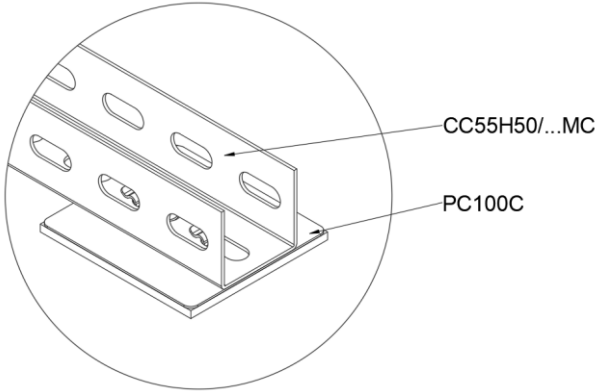
Table 1 Installation distance of subsequent frames of the photovoltaic structure depending on the combination of wind and snow zones

*1 wind zone below 300m asl; 3 wind zone below 500m asl;

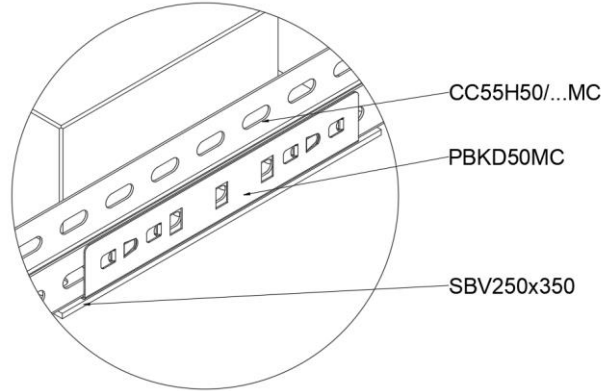
1 and 3 snow zone below 300m asl; 5 snow zone below 500m asl.



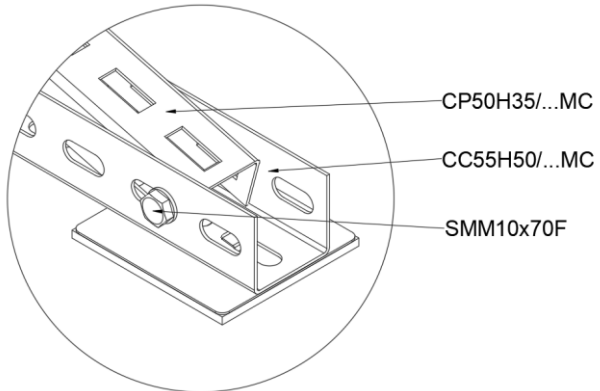
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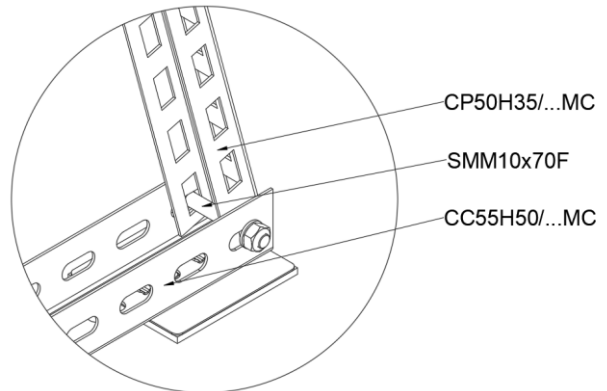
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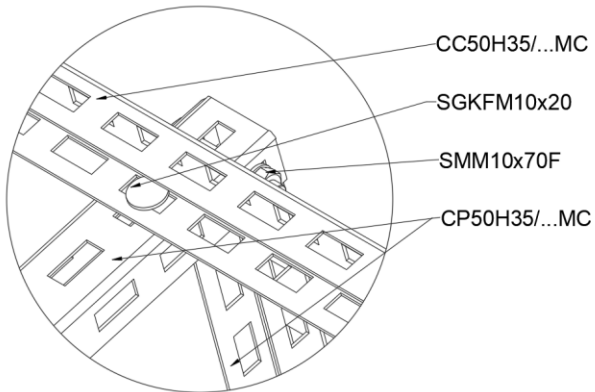
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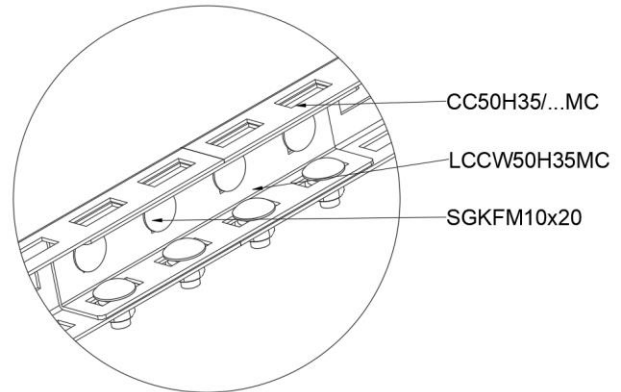
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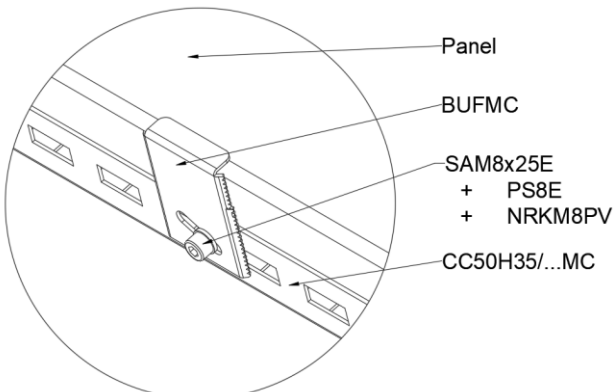
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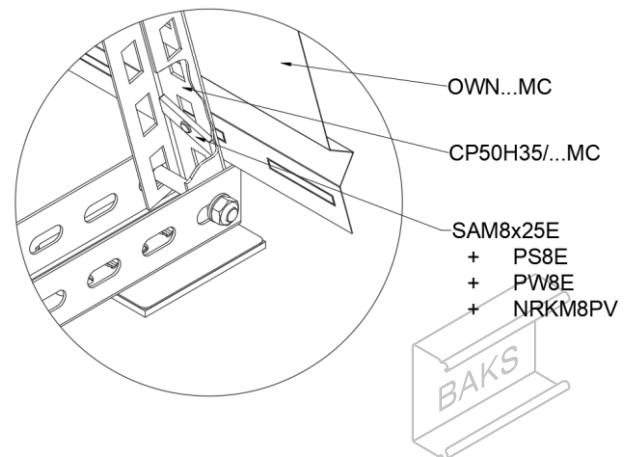
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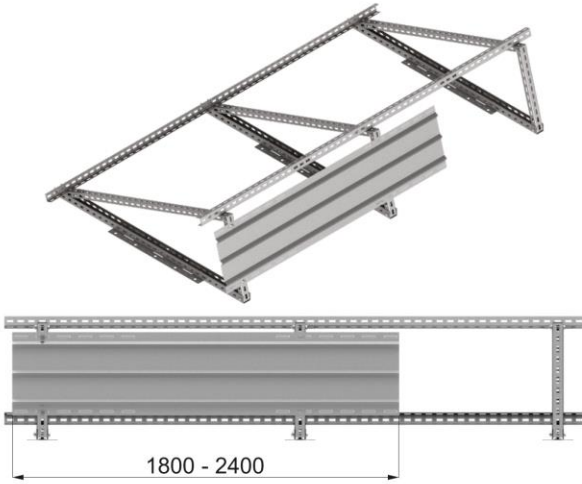
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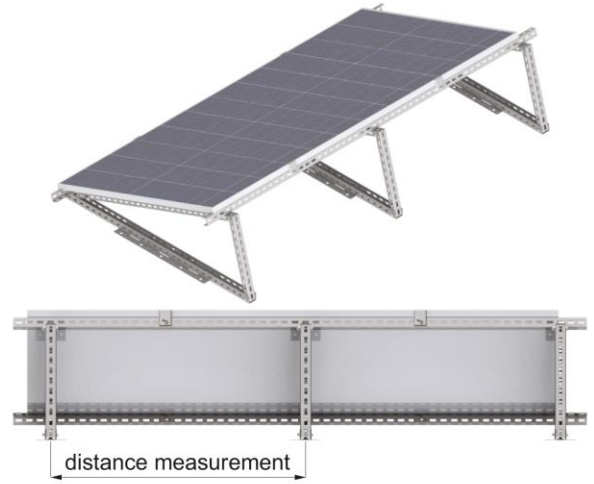
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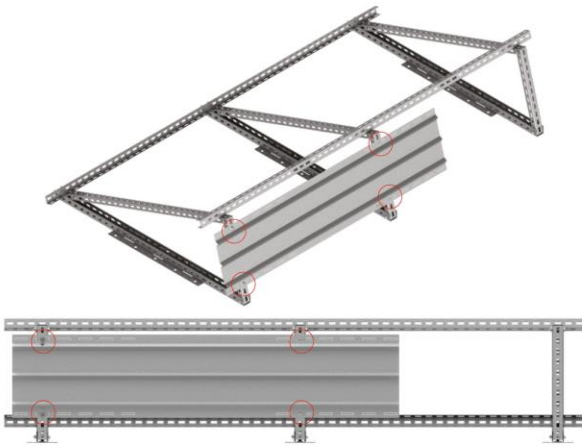
Installation instructions for wind shields in constructions DP - DTH...N



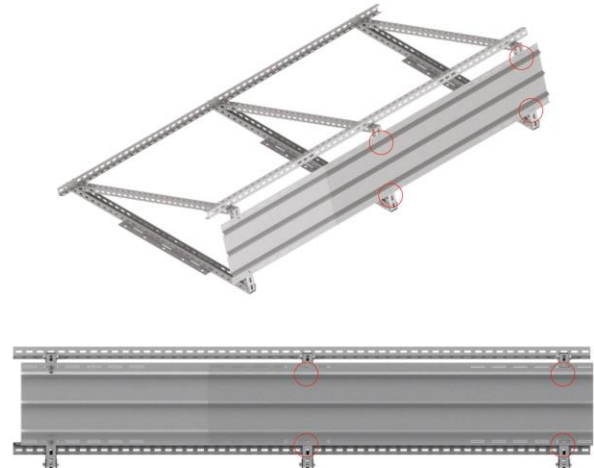
1. The length of the shields is selected on the basis of: distance between axes of triangular structures + 60 mm



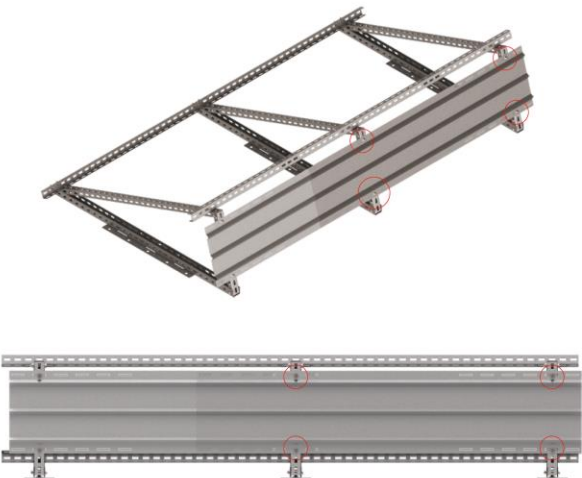
2. Measure the distance between the axes of the triangular structures.



3. Use a flat-bladed screwdriver to break out the holes in the housing aligned with the axes at point 2 and tighten with the M8 screws with diamond nuts.



4. Add the next shield and break out the overlapping holes in the covers with the holes in the channel sections



5. The neighbouring covers are tightened using shared M8 screws with diamond nuts

