

DP-DNHBE 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.**
- Ballasting values and distribution to be determined individually by the constructor with authorization
- Tighten **SAM8x...E** screws and **NKZM8E** nuts to a torque of 12-14 Nm.
- When tightening the **SGKFM8x20** and **SGKFM10x20PV** screw, hold the head of the screw in such a position that the underlay is blocked on the walls of the hole in which the screw is installed, and then, using a screwdriver, tighten the screw slowly until it is blocked in the hole. At the final stage, tighten the screw with the screwdriver successively with a torque of: M8 - 22 Nm; M10 - 42 Nm
- Tighten **SRM10x...F** screws to a torque of 20 Nm



3. Summary of components of the DP-DNHBE construction

No.	Product	Name of product	Designation in construction
1	Support Channel	CMP41H41/...MC	Support profile
2	Bottom handle	UPDMC	Panel support
3	Top holder	UPG...MC	Panel support
4	Side holder	BUF...	Side panel mounting clamp
5	Middle holder	PUF	Middle clamp for mounting the panels
6	Screw	SAM8x...E	Clamping screw
7	Flange nut	NKZM8E	Nut
8	Wind shield	OWN...MC	Wind shield
9	Hexagonal head screw	SSZ8x12E	Wind shield mounting
10	Spring washer	PS8E	Mounting of clamps and wind shield
11	Hexagonal head screw	SMM8x16F	Connecting together wind shields
12	Enlarged washer	PW8E	Wind shield mount
13	Mushroom head screw	SGKFM...	Screw + flange nut
14	Ballast support	PBK40MC	Ballast base
		PBKD40MC	Ballast base for increased ballast capacity (optional)
15	Vibration-insulating rubber	SBV250x350	Separation between the elements of the substructure between support structure elements and roof sheathing
16	Screw with rhomboid nut	SRM10x30F	Mounting of UPG and UPDC brackets
17	Channel base with vibration isolating rubber	PC50P	Prevents pressing of the steel profiles endings against the roof sheathing
18	Grounding washer	PUP	Panel grounding
19	Protective cap	NOWPAL40x40SR	Protects steel profiles endings

4. Assembly of DP-DNHBE structure

The A and B dimensions (dimension B is the module length + 20mm) depend on the size of the modules to be fitted. This must be determined by physically fitting the module onto the mounted UPG...MC and UPDMC holders.

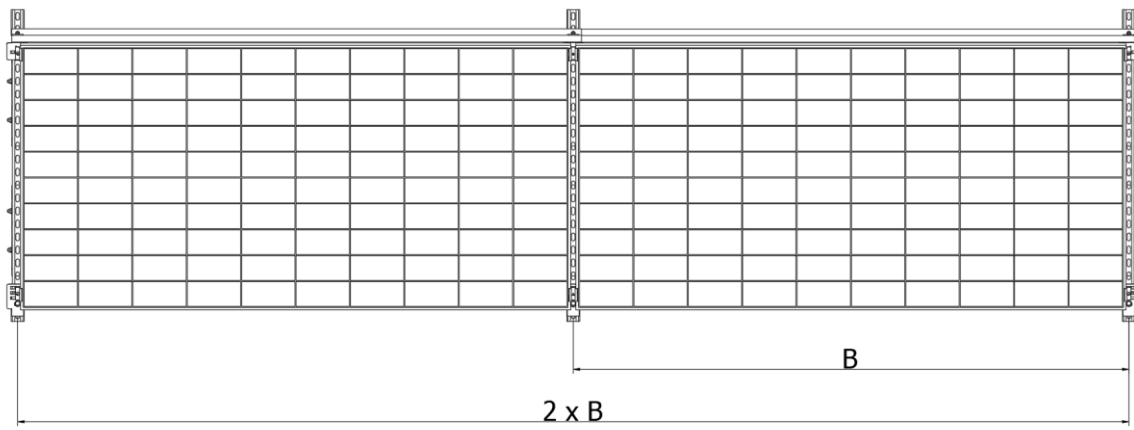
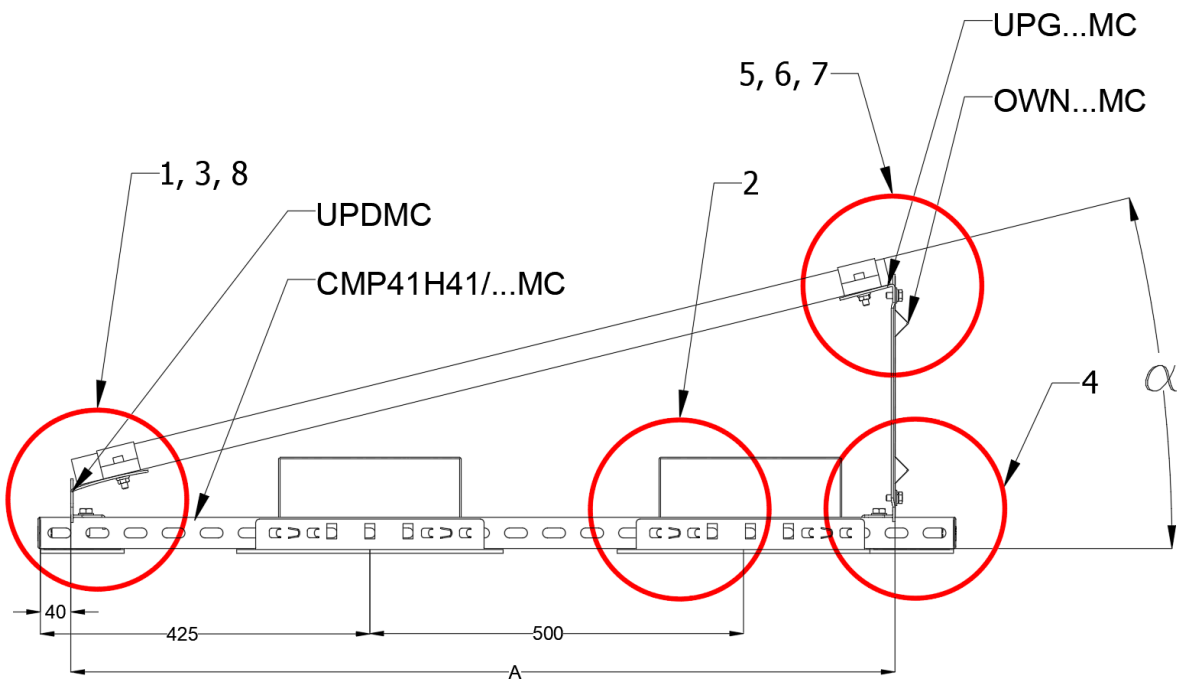
The maximum size of modules that can be correctly mounted on a DP-DNHBE structure is: 2100mm long x 1150mm wide (to be verified with module manufacturer)

Grounding washers of the PUP type should be placed at the mounting points of the PUF middle holders.

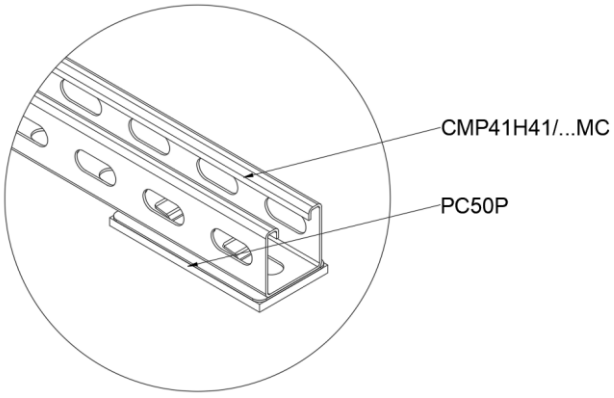
Where there are an even number of modules in a single row of construction, grounding washers are fitted every second pair of modules.

In the case of an odd number of modules, grounding washers must additionally be added under the extreme PUF holders to ensure that the last module is also grounded.

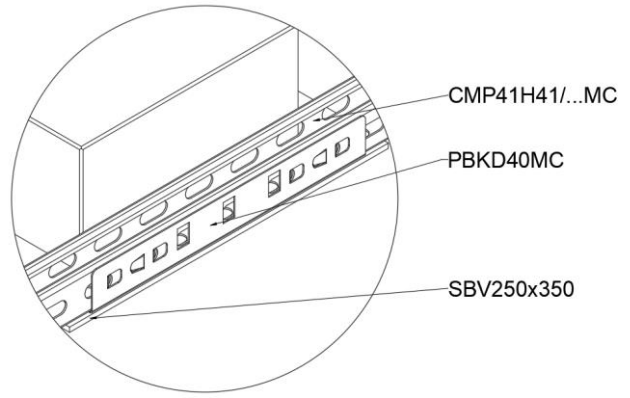




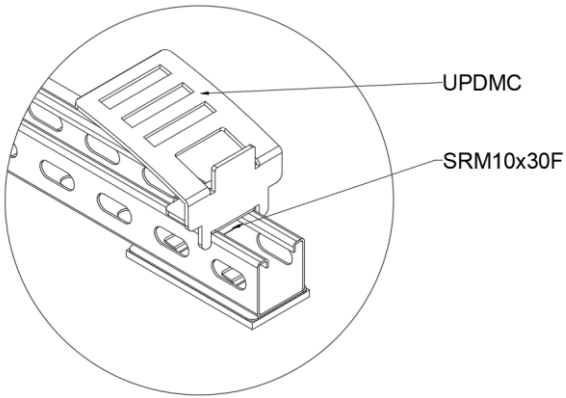
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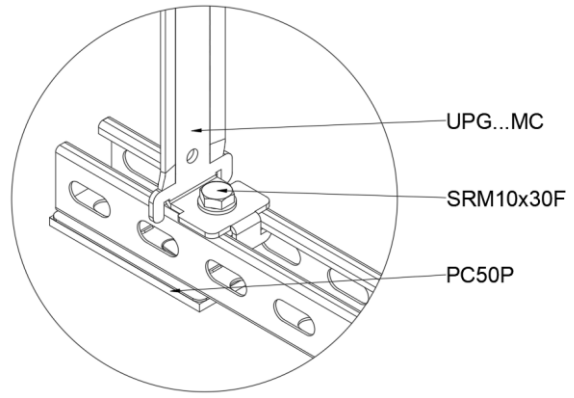
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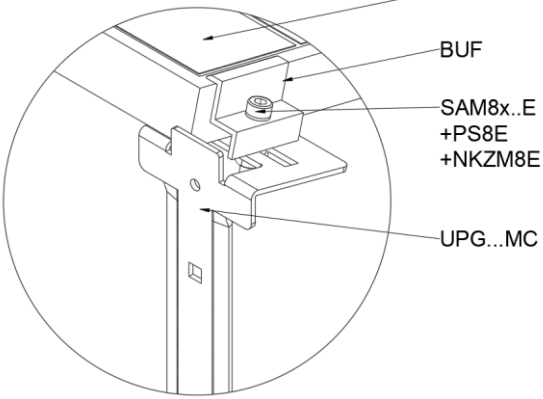
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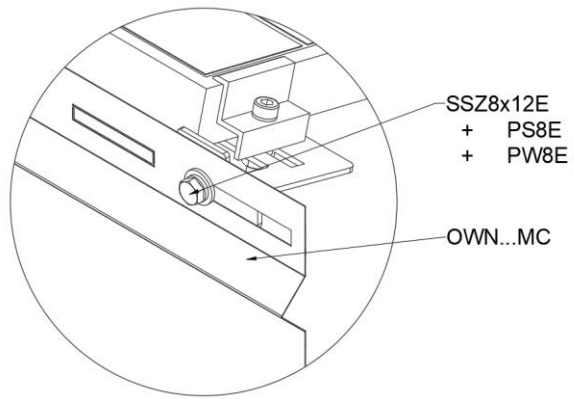
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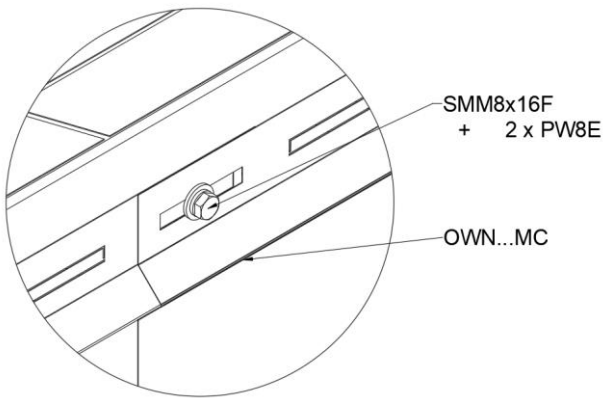
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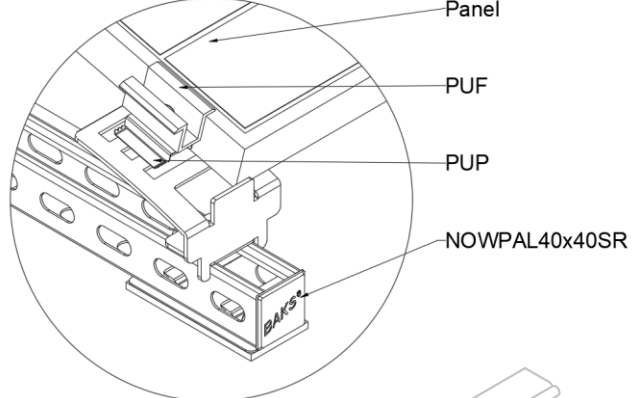
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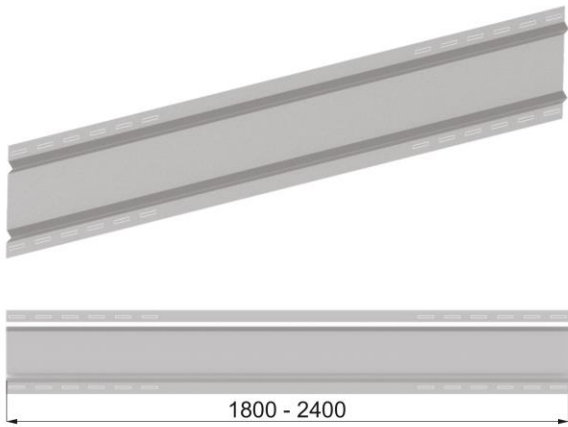


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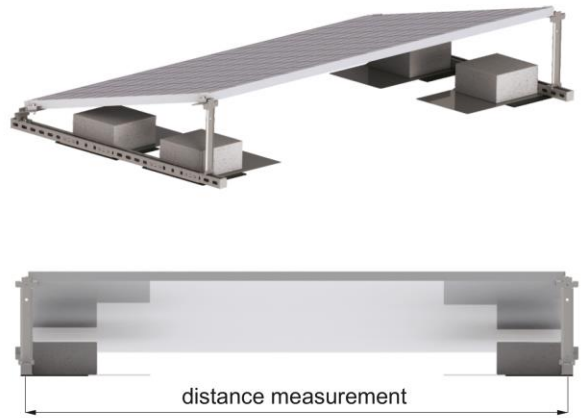


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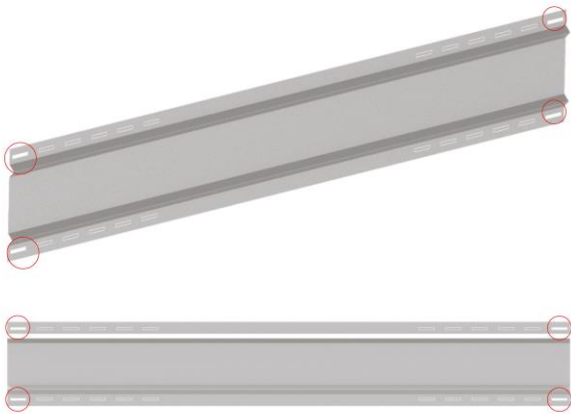




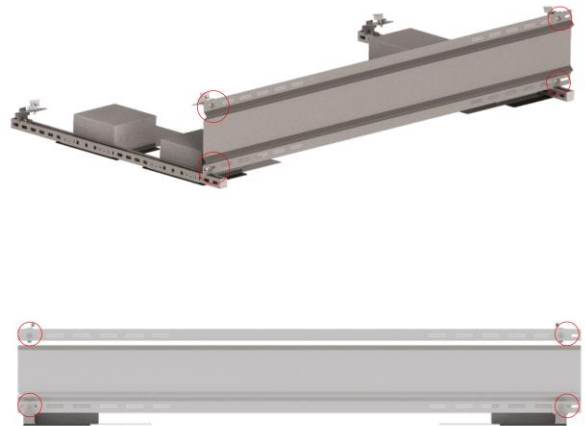
1. The length of the shields is selected based on:
panel length + 60 mm



2. Measure the distance between the axes of the UPG...MC holders to which the panel is mounted.



3. Use a flat-bladed screwdriver to break out of the holes in the shield that overlap with the holes of the UPG...MC holders from point 2.



4. Attach the shield to the UPG...MC holders and tighten it with M8 screws into the threaded holes of the holders.



5. Mounted shield.



6. When assembling a sequence of panels, neighbouring shields are to be tightened with shared M8 screws, repeating steps 3,4.

