

DP-DNHKSE CONSTRUCTION ASSEMBLY INSTRUCTIONS



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Steel structure for flat roof in the SMA40 rail-mounted 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.**
- 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-DNHKSE construction

No.	Product	Name of product	Designation in construction
1	Support Channel	CMP41H41/...MC	Support profile
2	Bottom holder	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	Wind shield	OWN...MC	Wind shield
8	Hexagonal head screw	SSZ8x12E	Wind shield mounting
9	Spring washer	PS8E	Mounting of clamps and wind shield
10	Hexagonal head screw	SMM8x16F	Connecting together wind shields
11	Enlarged washer	PW8E	Wind shield mount
12	Mushroom head screw	SGKFM...	Screw
13	Base	SMA40	Aluminium base
14	Self-drilling screw	SMDP6,0x25E	Anchoring SMA40 base to the roof
15	Flange nut	NKZM8E	Nut
16	Screw with rhomboid nut	SRM10x30E	Mounting of UPG and UPDC holders
17	Screw	SSZ8x30E	Fixing screw SMA40
18	Grounding washer	PUP	Panel grounding
19	Protective cap	NOWPAL40x40SR	Protects steel profiles endings
20	Cellular rubber	EPDMW2x40	Separation of roof sheathing from the base

4. Assembly of DP-DNHKSE 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

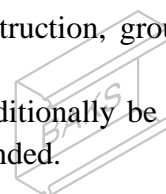
Tighten the aluminium rails with at least 4 self-drilling screws SMDP6.0x25E.

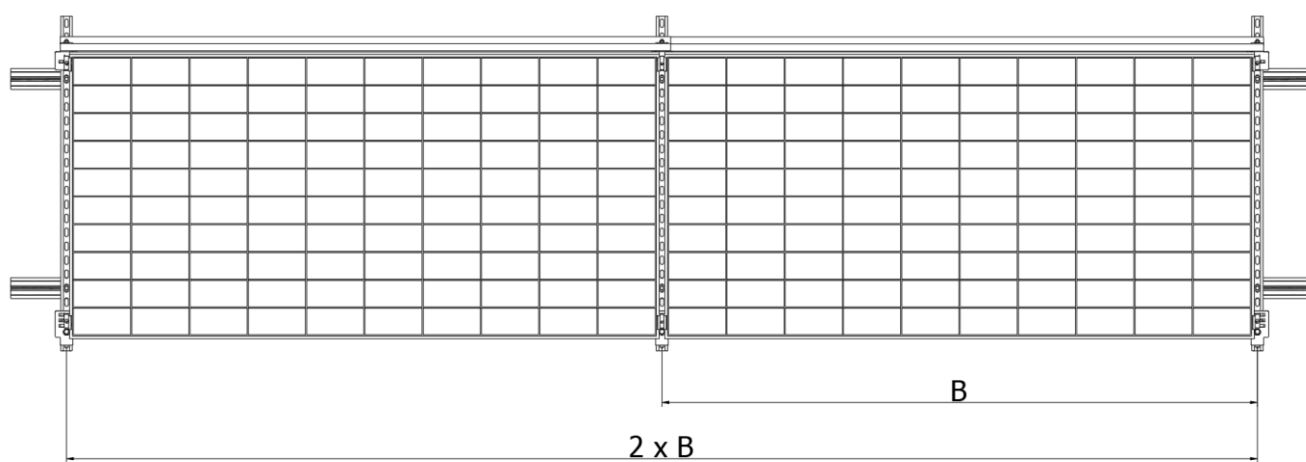
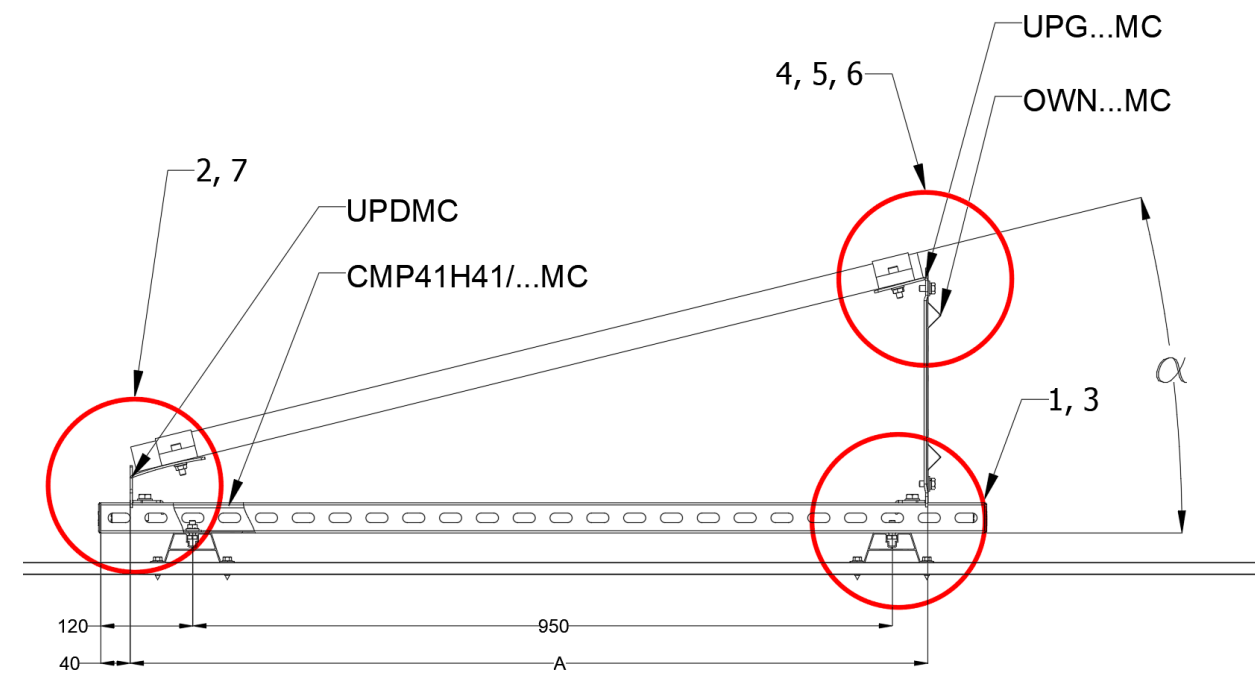
The maximum size of modules that can be correctly mounted on a DP-DNHKSE structure is: 2100mm long x 1150mm wide (to be verified with module manufacturer))

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

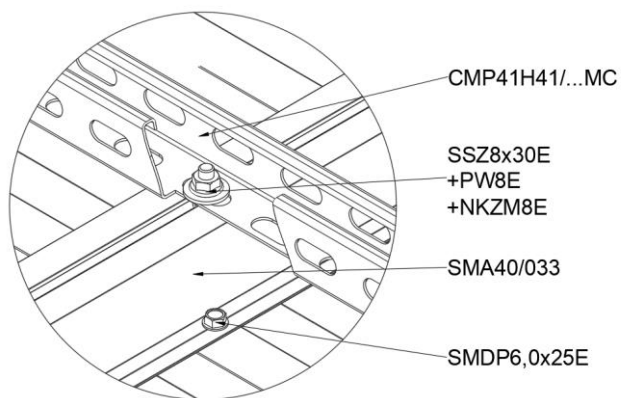
Where there are an even number of modules in a single row of construction, grounding washers are fitted every second pair of modules.

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.

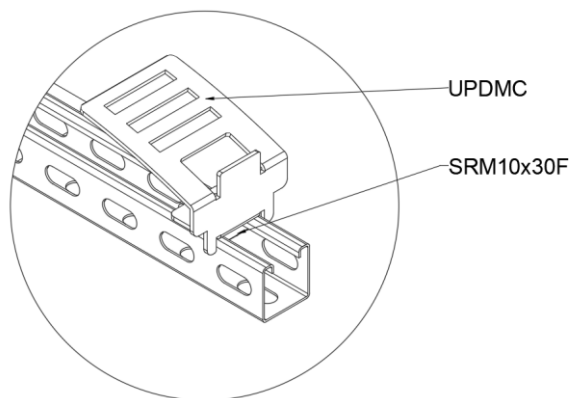




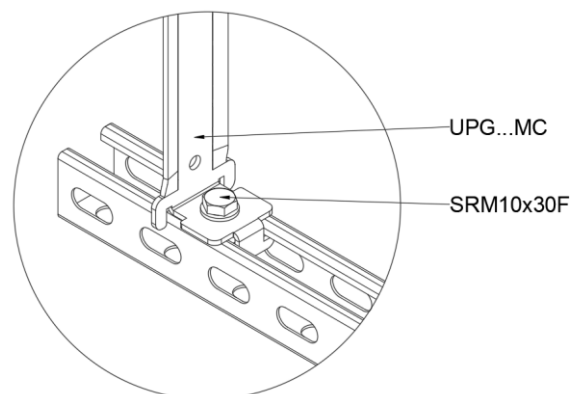
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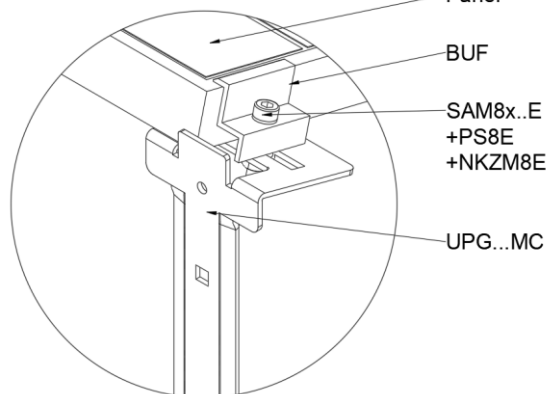
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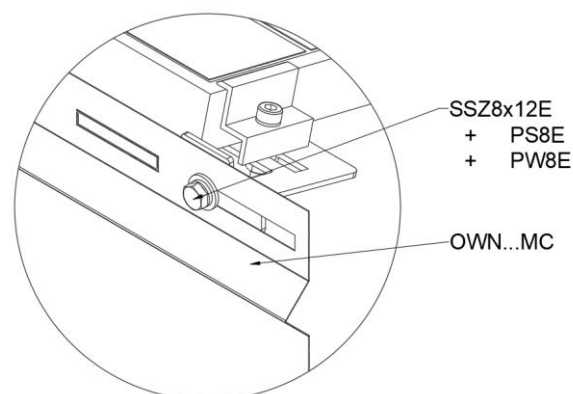
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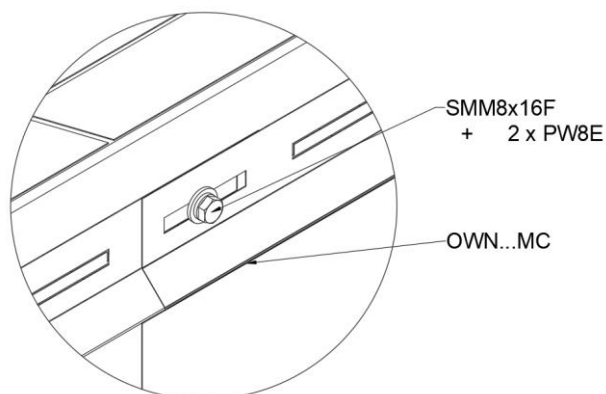
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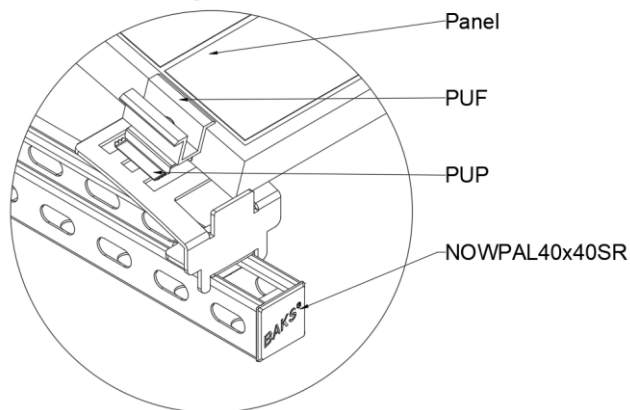
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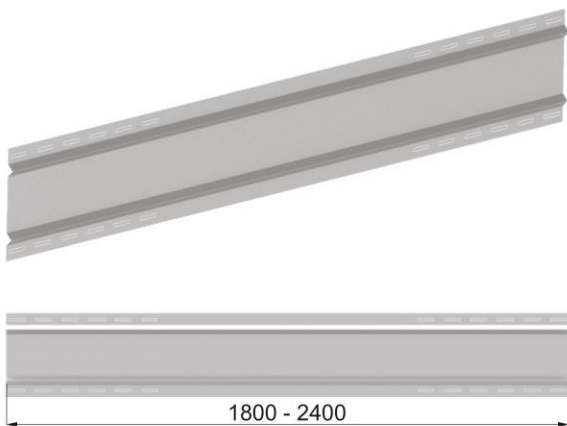


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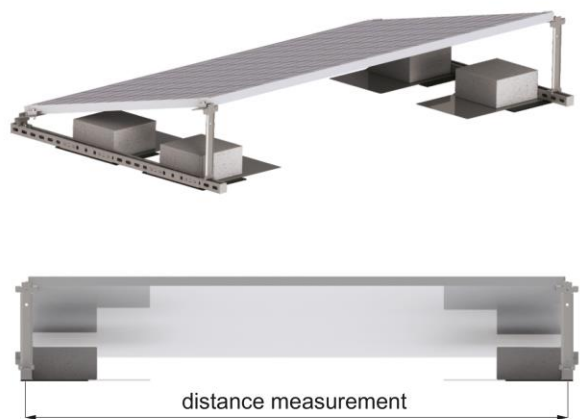


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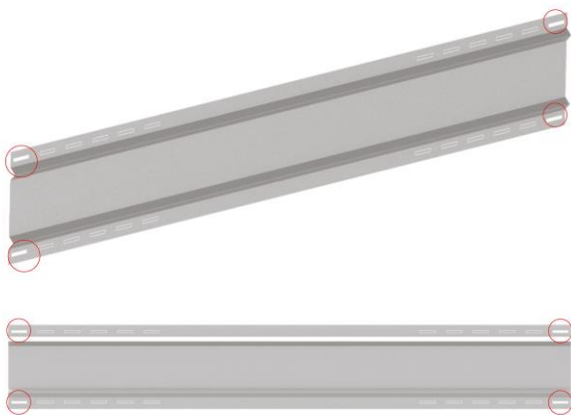




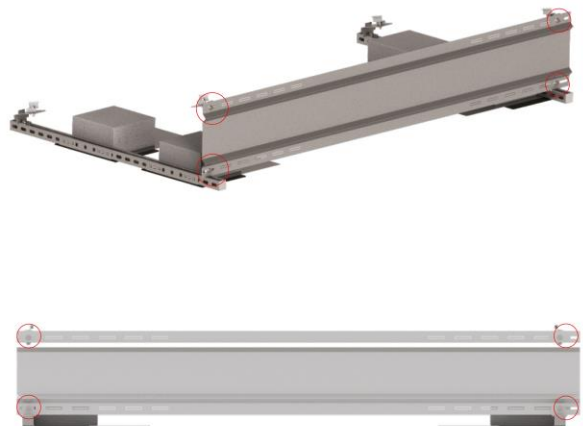
1. The length of the shields is selected based on:
panel length + 60 mm



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.

