

CONSTRUCTION ASSEMBLY INSTRUCTIONS DP-DTHWE-WZ



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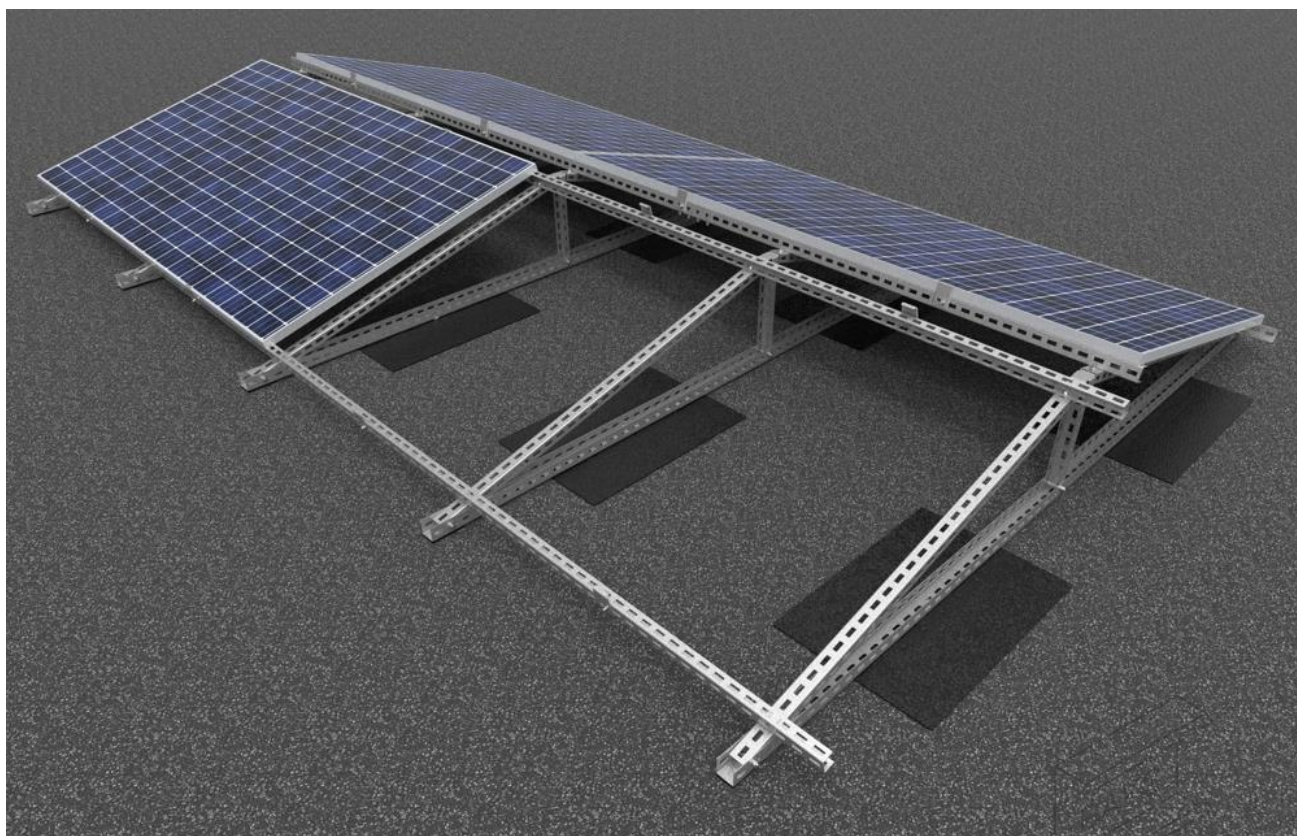
ul. Jagodne 5

05-480 Karczew

Poland

Steel structure for flat roof in a pasted version..

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



1. Essential tools for assembling the structure

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

2. General information:

- Possibility of using the structure in wind and snow zones in accordance with the following standards: PN-EN 1991-1-3 and PN-EN 1991-1-4.
- Before installing the structure, read the installation instructions for photovoltaic panels Ballast values determined individually by a licensed builder
- SAM8x screws... E and NUTS NRM8PV should be tightened with a torque of 12-14 Nm
- When tightening the SGKFM8x20 and SGKFM10x20PV screw, hold the screw head with your hand the head of the screw in such a position that the undersink locks on the walls of the hole where the screw is installed, and then using a screwdriver tighten the screw slowly until it locks in the hole. At the final stage, tighten the screw with a screwdriver successively with a torque of: M8 - 22 Nm; M10 - 42 Nm
- Tighten the screws SMM10x...F to a torque of 30 Nm

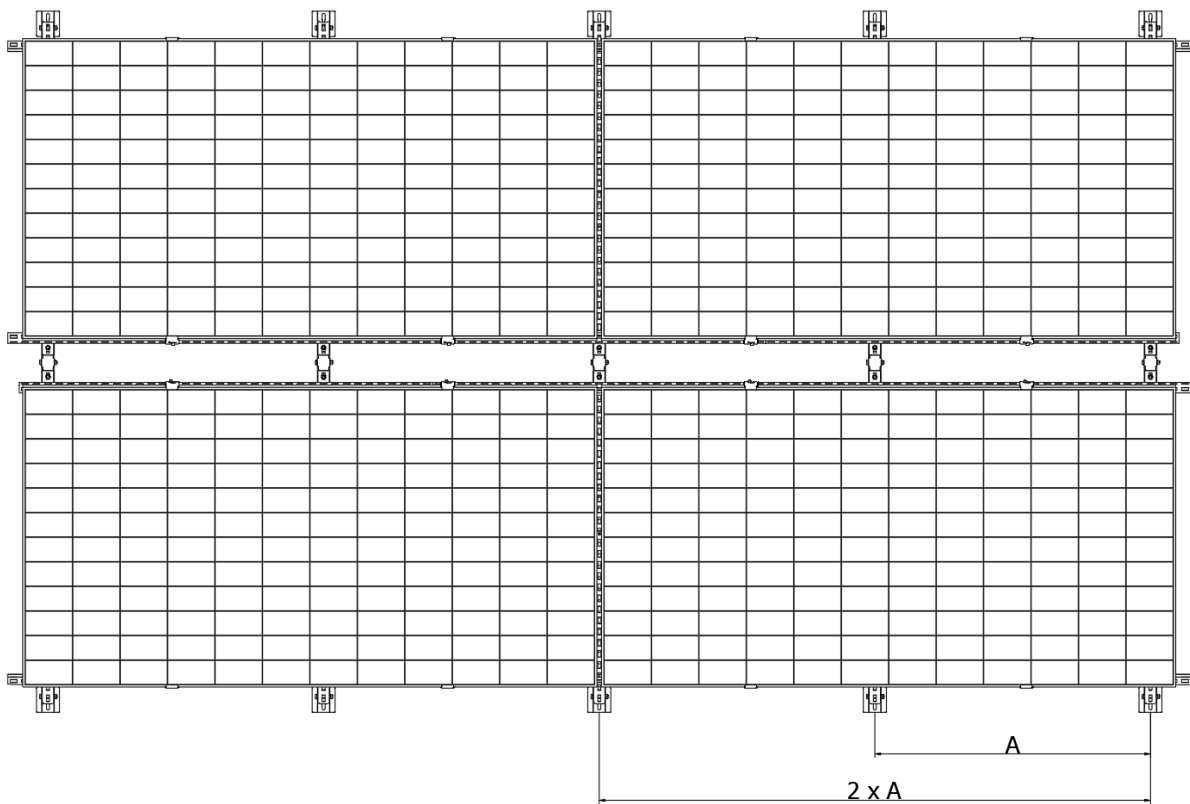
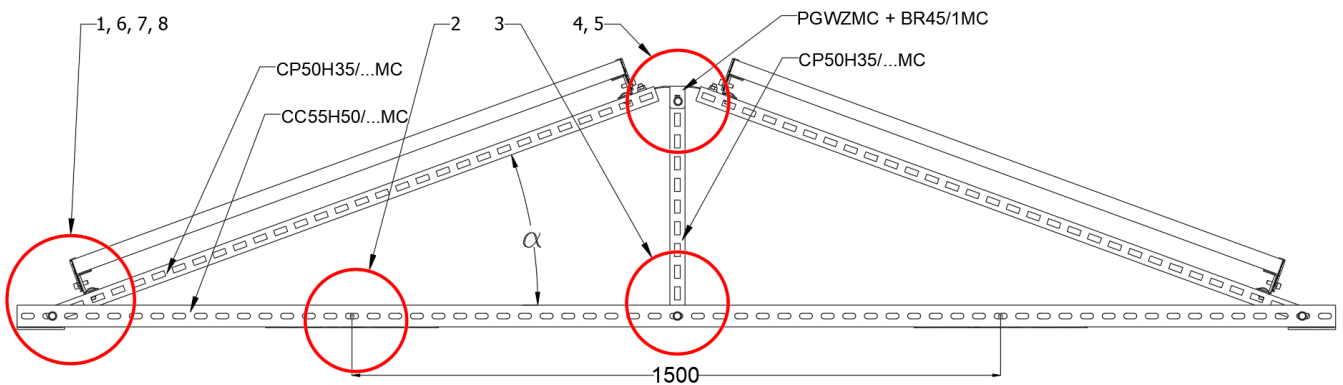


3. Summary of components of the DP-DTHWE-WZ construction

Nr	Nazwa	Symbol produktu	Przeznaczenie w konstrukcji
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	Top base east-west	PGWZMC	Assembly of the structure in the East-West variant.
8	Side holder	BUFMC	Panel mounting holder
9	Screw	SAM8x25E	Mounting screw for holders and wind shields
10	Rhomboid nut	NRKM8PV	Rhomboid nut
11	Spring washer	PS8E	Spring washer
12	Enlarged washer	PW8E	Enlarged washer
13	Mushroom head screw	SGKFM10x20	Screw + flange nut
14	Steel mounting plate	SPM1	Pasted plate
15	Channel base with vibration isolation rubber	PC100C	Prevents pressure of steel profile ends on roof sheathing



4. Assembly of DP-DTHWE-WZ 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.

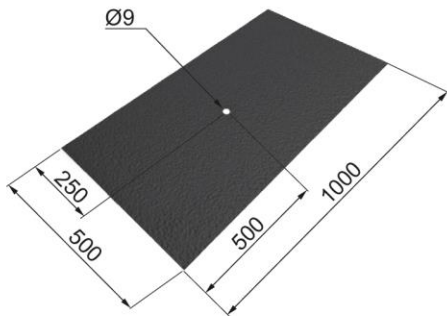


Assembly instructions for SPM1 Steel Fixing Plate to roofing felt

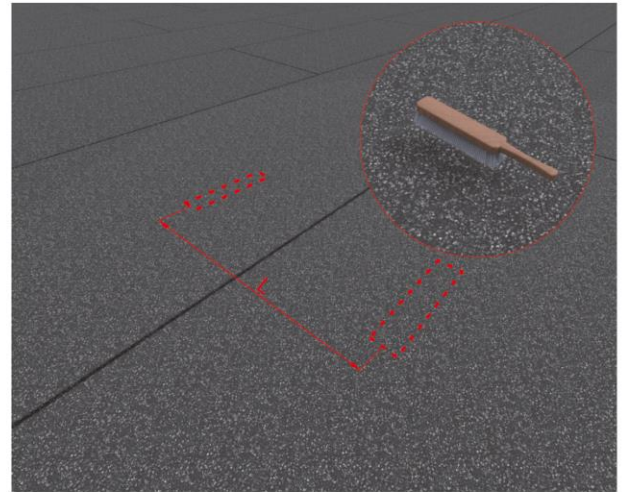
Note:

Requirements of the roofing felt to be used:

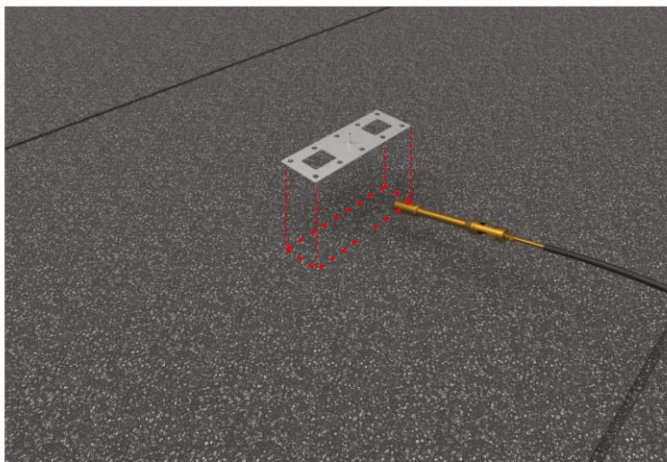
- 1) EN 12310-1 (tear strength) – min. 145N
- 2) EN 12311-1 (tensile strength) – min. 290N/50 mm
- 3) EN 12316-1 (peel strength of the joints) – min. 120N/50 mm
- 4) EN 12317-1 (shear strength of the joints) – min. 490N/50 mm



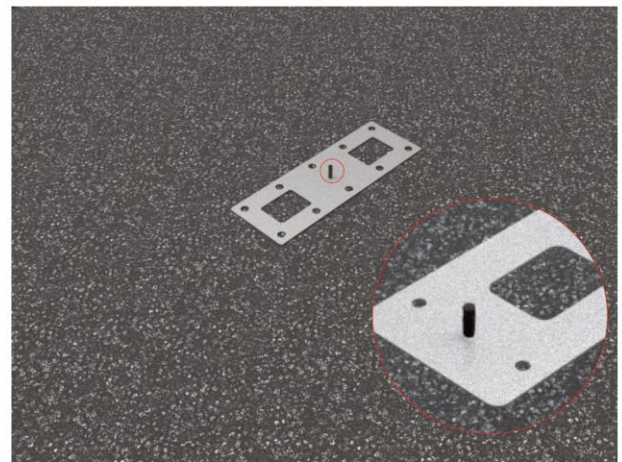
1. Before starting to install the SPM1 plates, cut out a fragment of roofing felt with minimum dimensions of 500 x 1000 mm, then cut out holes with a diameter of Ø9 mm in the locations of screws



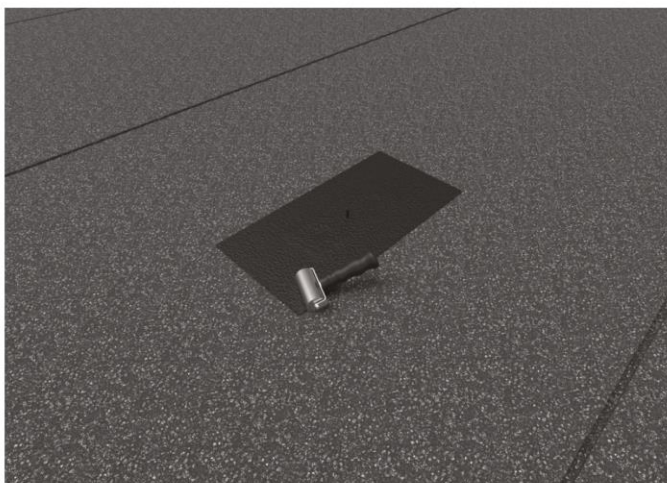
2. Measure the distance between the SPM1 plates, mark the points and then use a wire brush to clean the 500 x 1000 mm area of the roofing felt on the roof



3. On the designated area heat the surface in the size of a plate or slightly larger

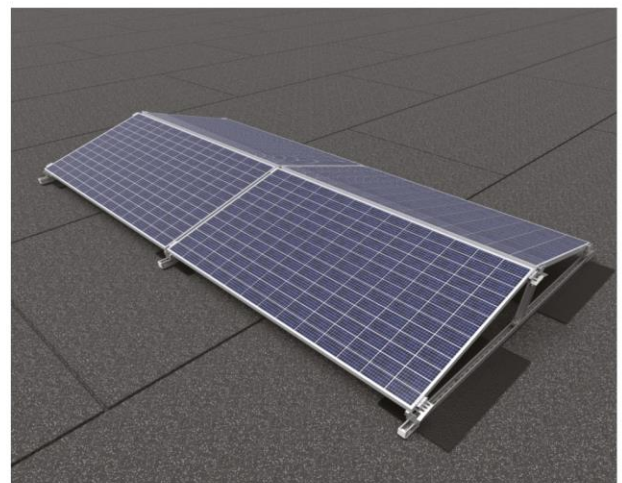


4. SPM1 plate should be placed on heated areas, pressed against prepared surface, protruding threads should be secured with NOP50 protection cap



5. Warm up the prepared roofing felt, cover the plate with it and then press it with a roofing roller in the locations of the holes

6. Warm up the side of the roofing felt and the surface and at the same time press the roofing felt with a roofing roller, repeat the operation for each side until the plate is fully fixed to the roof surface



7. Correctly installed structure using SPM1 plate and DP-DNHWE-WZ mounting system

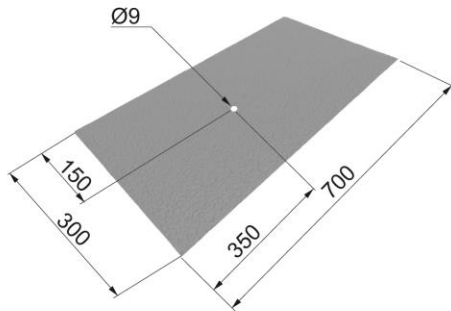


Assembly instructions for SPM1 Steel Fixing Plate to membrane

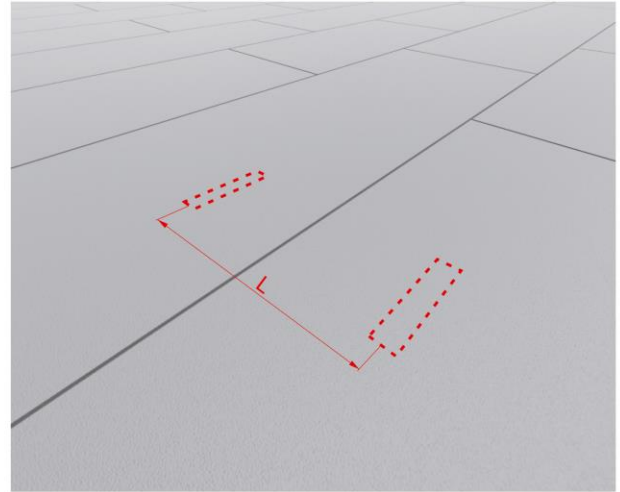
Note:

Requirements of the membrane to be used: PVC, ECB, EPO
min 1.2 mm thick:

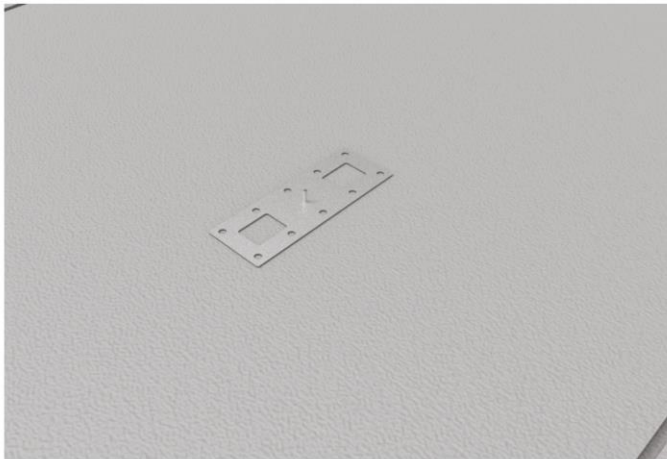
- 1) EN 12310-2 (tear strength) – min. 105N
- 2) EN 12311-2 (tensile strength) – min. 505N/50 mm
- 3) EN 12316-2 (peel strength of the joints) – min. 145N/50 mm
- 4) EN 12317-2 (shear strength of the joints) – min. 445N/50 mm



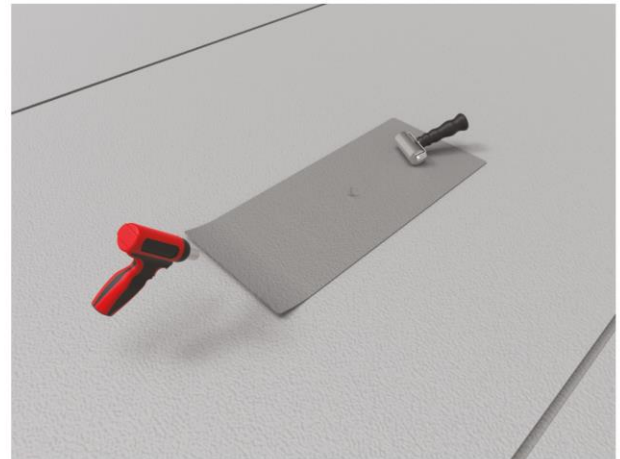
1. Before starting to install the SPM1 plates, cut out a fragment of membrane with minimum dimensions of 300 x 700 mm, then cut out holes with a diameter of Ø9 mm in the locations of screws, finally round the corners of the membrane.



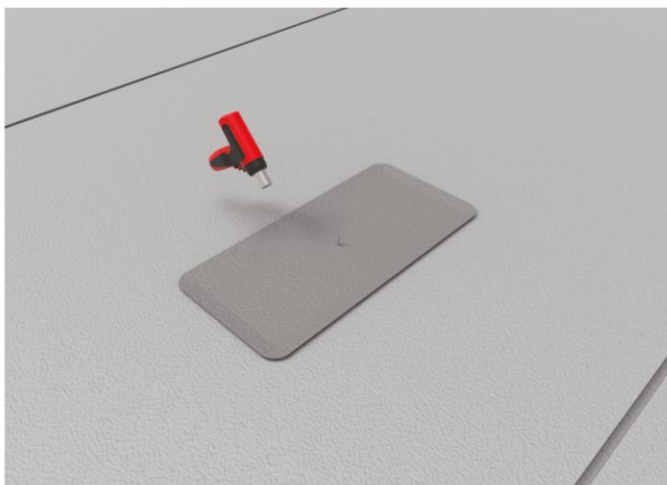
2. Measure the distance between the SPM1 plates, then mark the points.



3. Place the SPM1 plate on the designated place

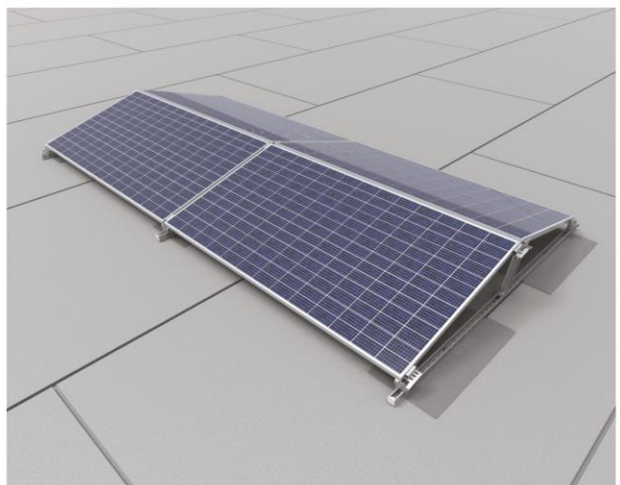


4. Cover the SPM1 plate with the prepared membrane and start the installation with a manual welding machine. Initially weld an hole of 60 x 80 mm, after proper heating press the membrane with a roofing roller. Repeat for the remaining holes.



5. Once the holes are welded, weld all sides around the SPM1 plate.

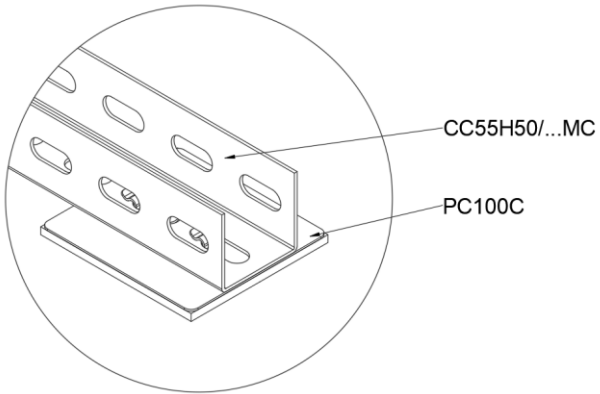
6. The SPM1 plate glued to the membrane is a basis for a structure for PV Installations.



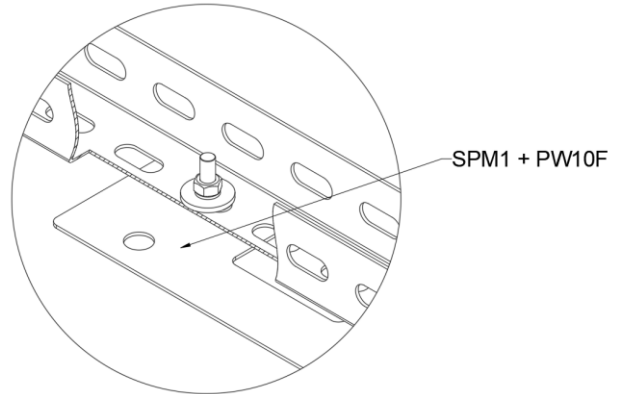
7. Correctly installed structure using SPM1 plate and DP-DNHWE-WZ mounting system



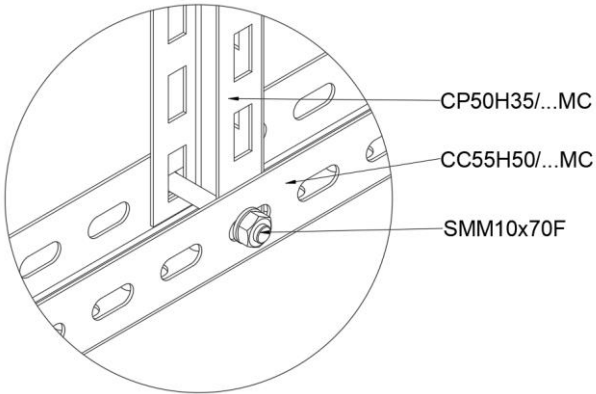
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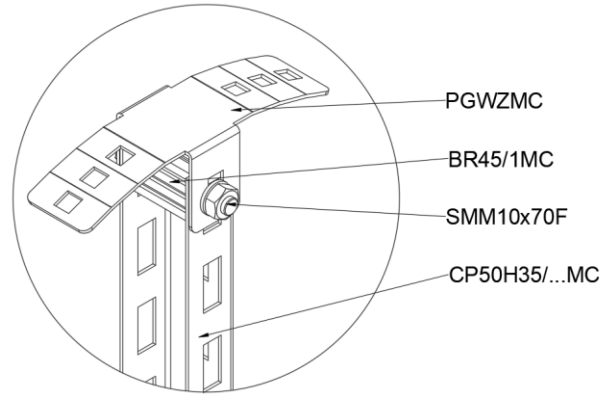
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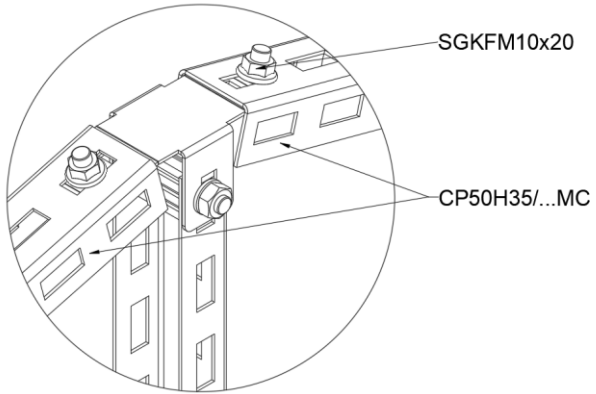
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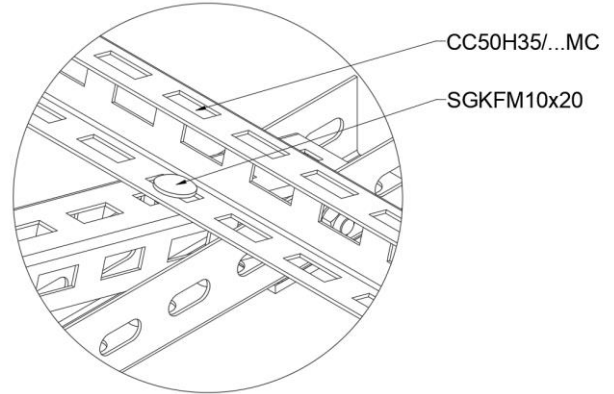
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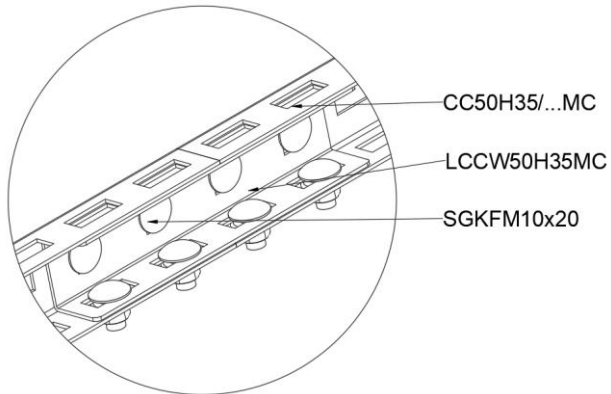
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