



INSTALLATION INSTRUCTIONS FOR THE DP-DTHWS-WZ STRUCTURE

(mounting along the short side)

Manufacturer:

BAKS

5 Jagodne Street

05-480 Karczew

Poland

Steel structure for a flat roof in a welded version.

Installation of PV panels in a horizontal arrangement (horizontal)
along the short side of the panel.



BAKS - KAZIMIERZ SIELSKI

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1. Essential tools for assembling the structure

- Allen wrench size 6
- Cordless screwdriver with speed and torque control
- Hexagon bit, Allen size 6 for screwdriver head
- 13 mm Combination wrenches
- Ratchet wrench with 13 mm sockets
- Extension 100-120mm for socket wrenches
- Rubber hammer
- Torque wrench range 10-30 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 proceeding with the installation of the structure, you should read the installation instructions for photovoltaic panels**
- The BUFEK.../PUFK fastening clamps should be tightened to 12-14 Nm (verify with the module manufacturer's installation instructions)
- Contact details of BAKS technical support - possibility of contact Mon-Fri Mon-Fri 7 a.m. - 3 p.m.

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3. List of elements included in the DP-DTHBS-WZ structure

No	Name	Product symbol	Purpose in construction
1	Bottom profile	PDTSWZMC	Load-bearing profile
2	Upper profile	PGTSWZMC	Panel support
3	Side clamp CLICK	BUFF...	Side clamp fixing panels
4	Middle clamp CLICK	PUFK	Middle clamp fixing panels
5	Screw set	SKKM8x12E	Fixing the bottom profile with the top profile
7	Steel Fixing Plate	SPM1	Pasted plate
8	C-section base with vibro-insulating rubber	PC100J	Prevents the ends of the steel profiles from pressing against the roof sheathing

Table 1 Construction Elements Overview

4. Mounting of the structure type DP-DTHWS-WZ (mounting on the short side of the panel)

Dimensions A and B (dimension B is the length of the module + 20mm) depends on the size of the installed modules. It should be determined by physically fitting the module to the mounted PDTSWZMC and PGTSWZMC profiles.

The maximum size of the modules that can be correctly mounted on the DP-DTHWS-WZ structure along the short side of the panel is: 2100mm long x 1150mm wide (to be verified with the module manufacturer)



By selecting the appropriate mounting hole in the base of the PDTSWZMC, we set the angle of the structure according to Figure 1

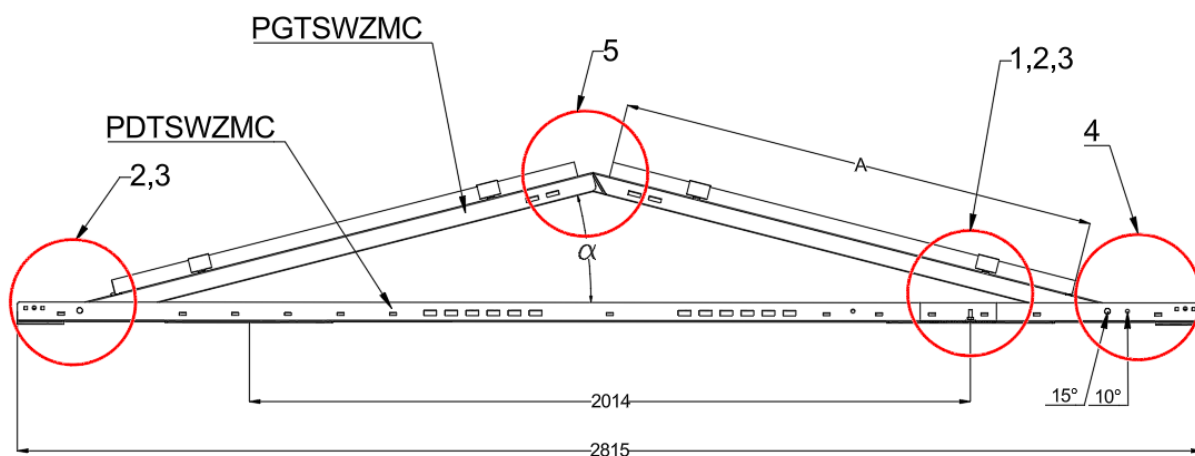


Figure 1.

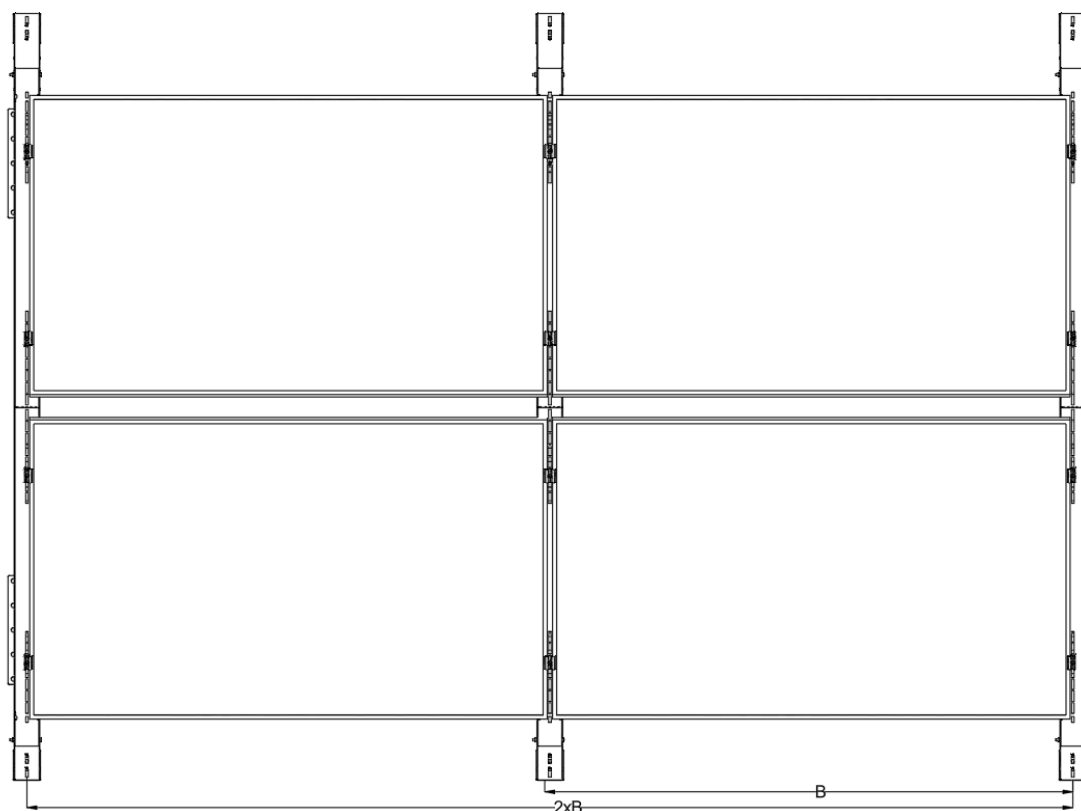


Figure 2.

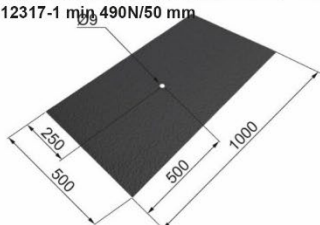


Assembly instructions for SPM1 Steel Fixing Plate to roofing felt

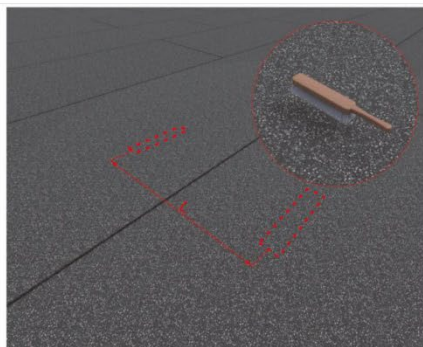
Note:

Requirements of the roofing felt to be used:

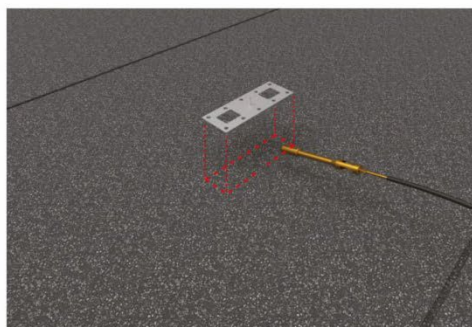
- 1) EN 12310-1 min 145N
- 2) EN 12311-1 min 290N/50 mm
- 3) EN 12316-1 min 120N/50 mm
- 4) EN 12317-1 min 490N/50 mm



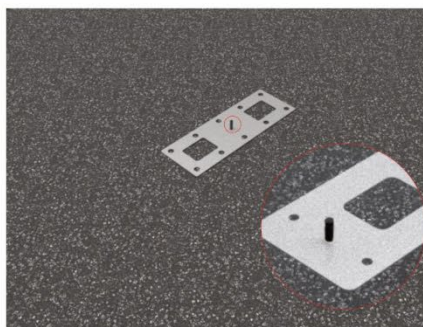
1. Before starting to install the SPM1 plates, cut out a fragment of roofing felt with minimum dimensions of 500 x 1000 mm, then cut out holes with a diameter of $\varnothing 9$ mm in the locations of screws



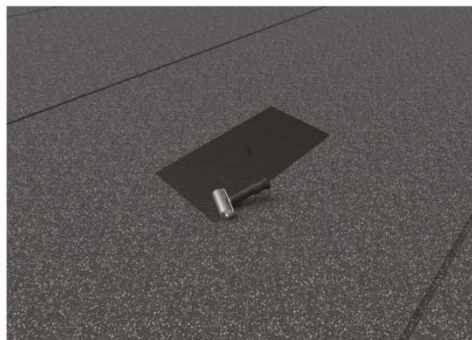
2. Measure the distance between the SPM1 plates, mark the points and then use a wire brush to clean the 500 x 1000 mm area of the roofing felt on the roof



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

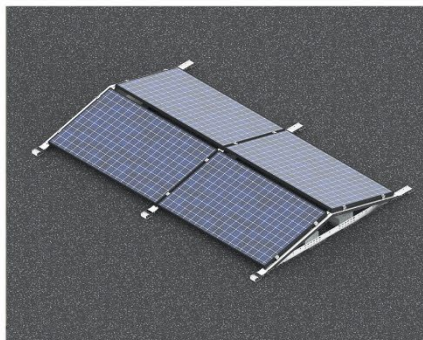


4. SPM1 plate should be placed on heated areas, pressed against prepared surface, protruding threads should be secured with NOP50 protection cap



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-DTHWS-WZ mounting system



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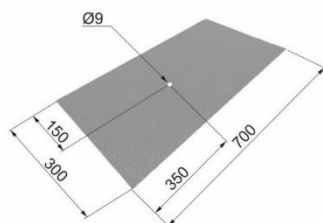
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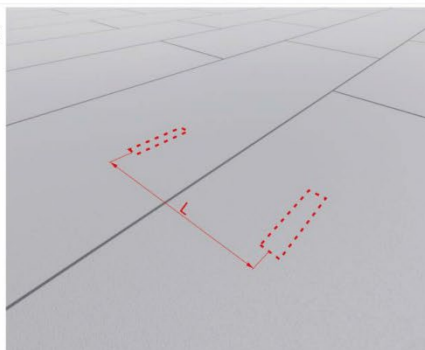


Assembly instructions for SPM1 Steel Fixing Plate to membrane
Note: Requirements of the membrane to be used: PVC, ECB, EPO min 1.2 mm thick:

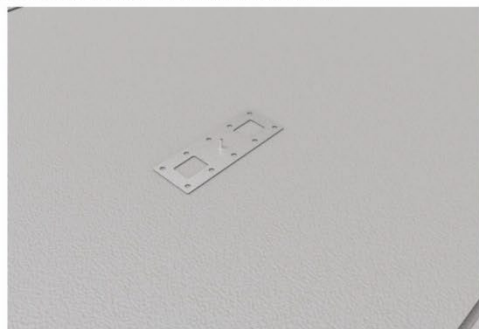
- 1) EN 12310-2 min 105N 2) EN 12311-2 min 505N/50 mm
 3) EN 12316-2 min 145N/50 mm 4) EN 12317-2 min 445N/50 mm



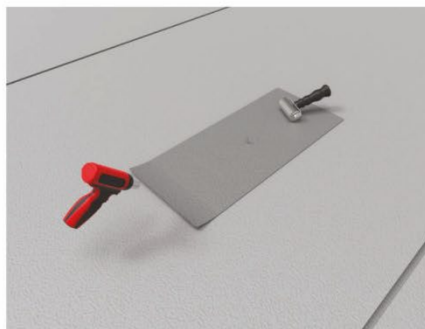
1. Before starting to install the SPM1 plates, cut out a fragment of membrane with minimum dimensions of 300 x 1000 mm, then cut out holes with a diameter of Ø9 mm in the locations of screws, finally round the corners of the membrane



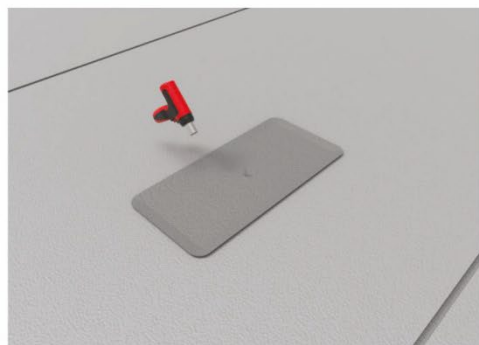
2. Measure the distance between the SPM1 plates, then mark the points



3. Place the SPM1 plate on the designated place

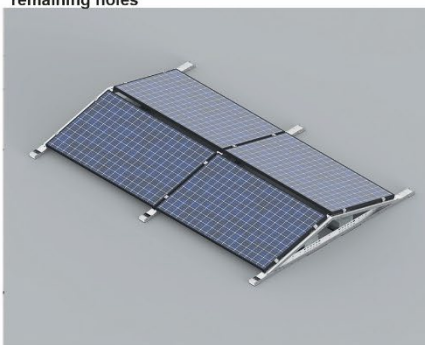


4. Cover the SPM1 plate with the prepared membrane and start the installation with a manual welding machine. Initially weld an hole of 60 x 80 mm, after proper heating press the membrane with a roofing roller. Repeat for the remaining holes



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-DTHWS-WZ mounting system



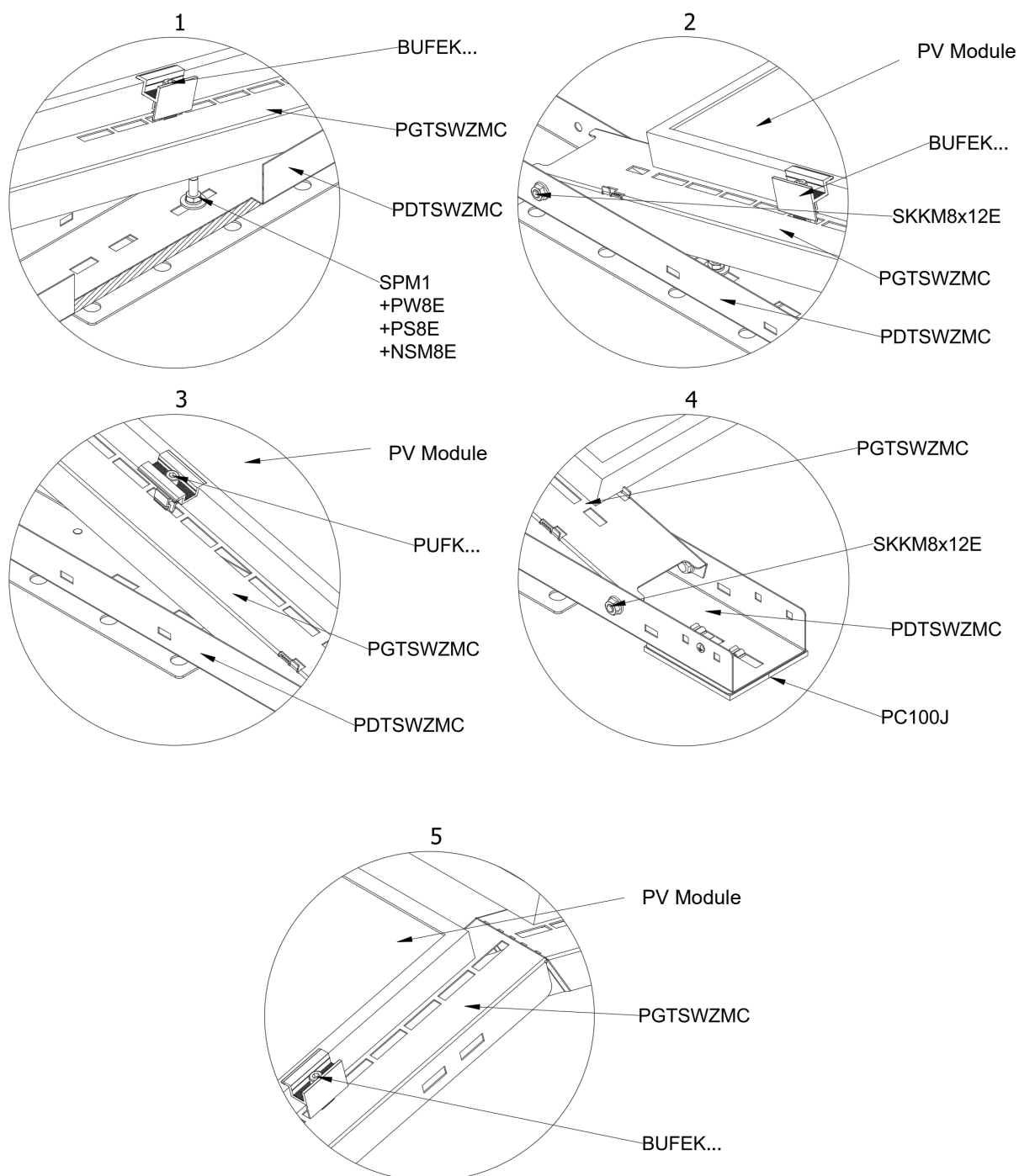
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(installation along the long side of the panel)

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- 13 mm Combination wrenches
- Ratchet wrench with 13 mm sockets
- Extension 100-120mm for socket wrenches
- Rubber hammer
- Torque wrench range 10-30 Nm

6. 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 proceeding with the installation of the structure, you should read the installation instructions for photovoltaic panels**
- Mounting clamps BUFEK... should be tightened with a torque of 12-14 Nm (verify with the assembly instructions of the module manufacturer)
- Contact details of BAKS technical support - possibility of contact Mon-Fri Mon-Fri 7 a.m. - 3 p.m.

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7. List of elements included in the DP-DTHBS-WZ structure

No	Name	Product symbol	Purpose in construction
1	Bottom profile	PDTSWZMC	Load-bearing profile
2	Top profile	PGTSWZMC	Panel support
3	Side clamp CLICK	BUFF...	Side clamp fixing panels
5	Screw set	SKKM8x12E	Fixing the bottom profile with the top profile
8	C-section base with vibro-insulating rubber	PC100J	Prevents the ends of the steel profiles from pressing against the roof sheathing
7	Steel Fixing Plate	SPM1	Pasted plate

Table 2 Construction Elements Overview

8. Mounting of the structure type DP-DTHWS-WZ (mounting along the long side of the panel)

Dimension A,B,C and D (Dimension D is the mounting distance of the panel clamp as specified in the assembly instructions by the module manufacturer). Dimension B is the resulting dimension depending on the length of the module.

Dimension A is the width of the panel (the maximum width of the panel that can be mounted is 1150mm).

Dimension D is the length of the module.



By selecting the appropriate mounting hole in the base of the PDTSWZMC, we set the angle of the structure according to Figure 1

Note: An equalization connection must be made to maintain electrical continuity by connecting the PDTSWZMC bases to each other every PV panel according to Figure No. 2

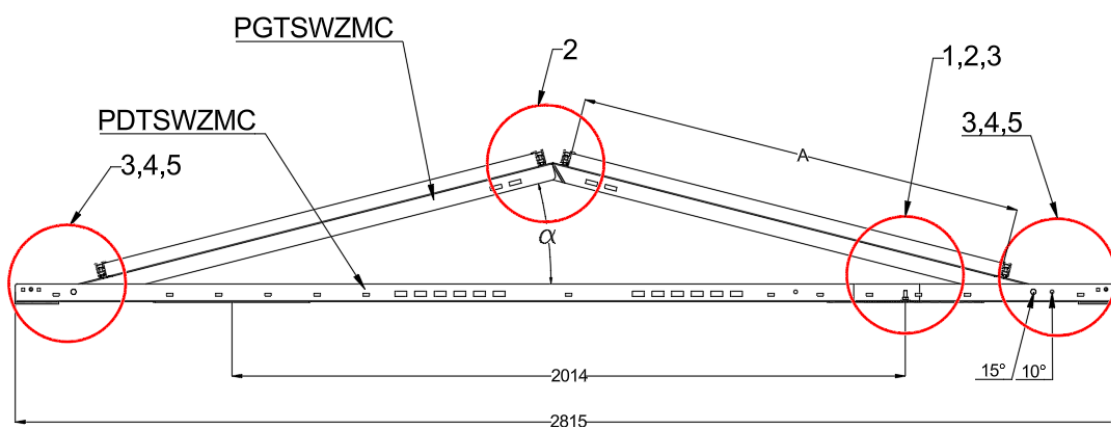


Figure 2.

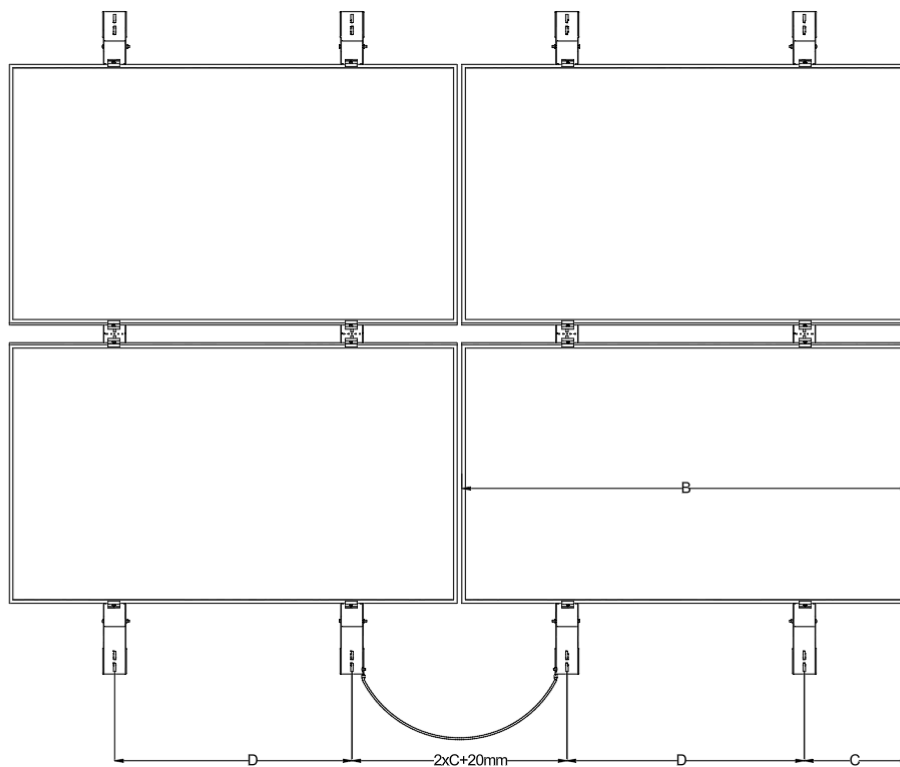


Figure 2.

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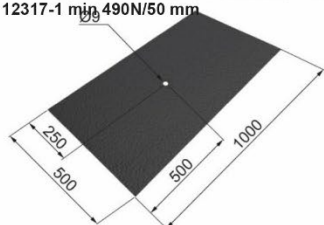


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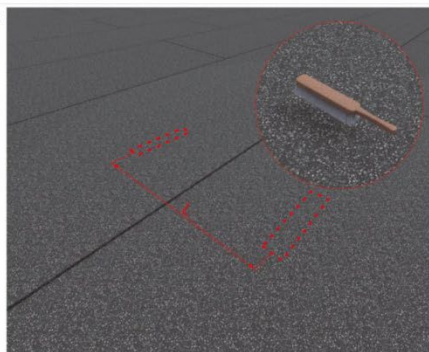
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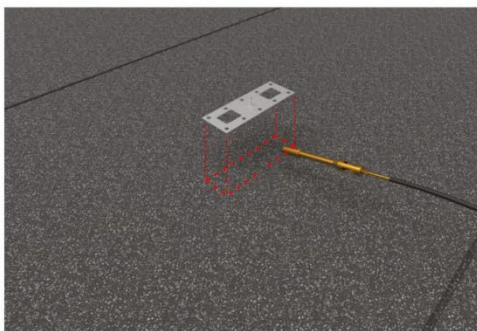
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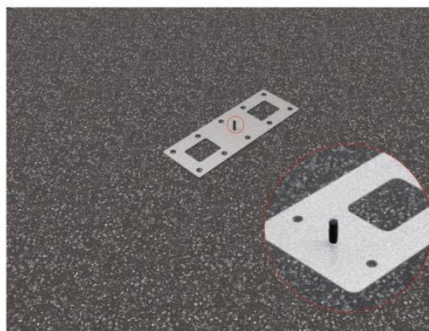
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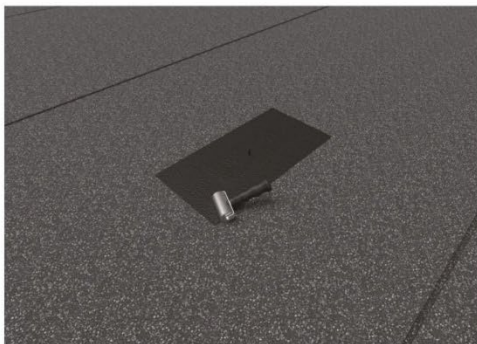
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3. On the designated area heat the surface in the size of a plate or slightly larger

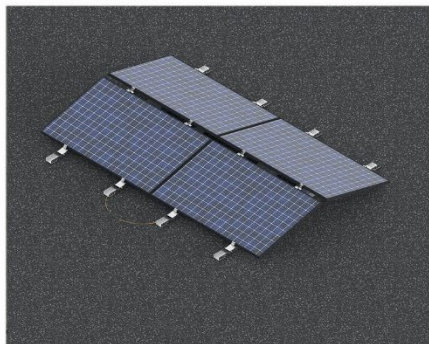


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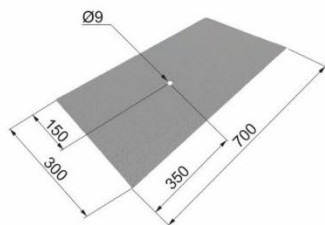
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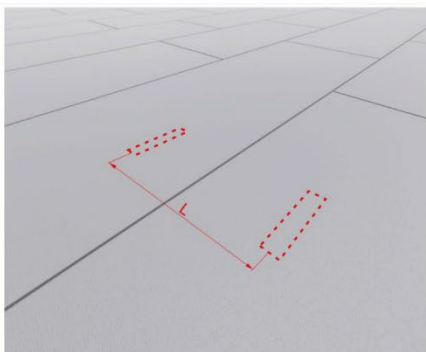


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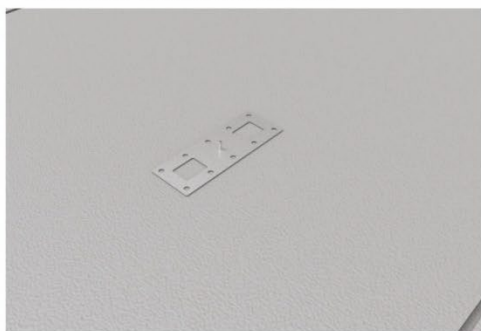
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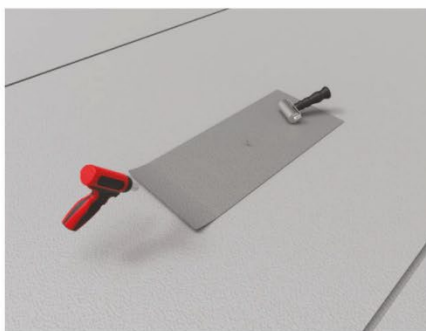
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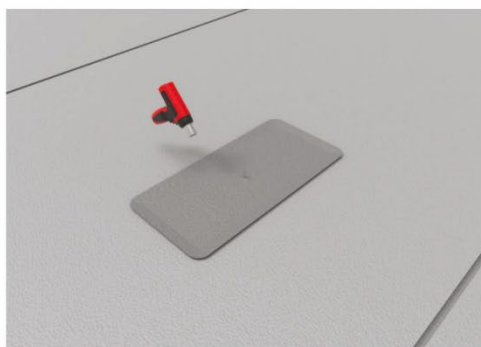
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3. Place the SPM1 plate on the designated place

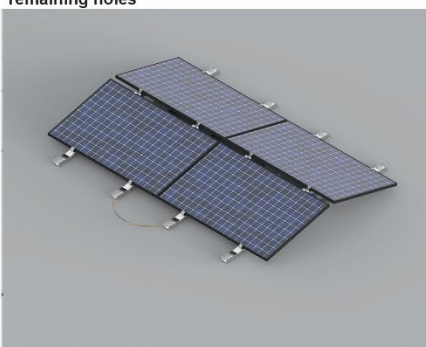


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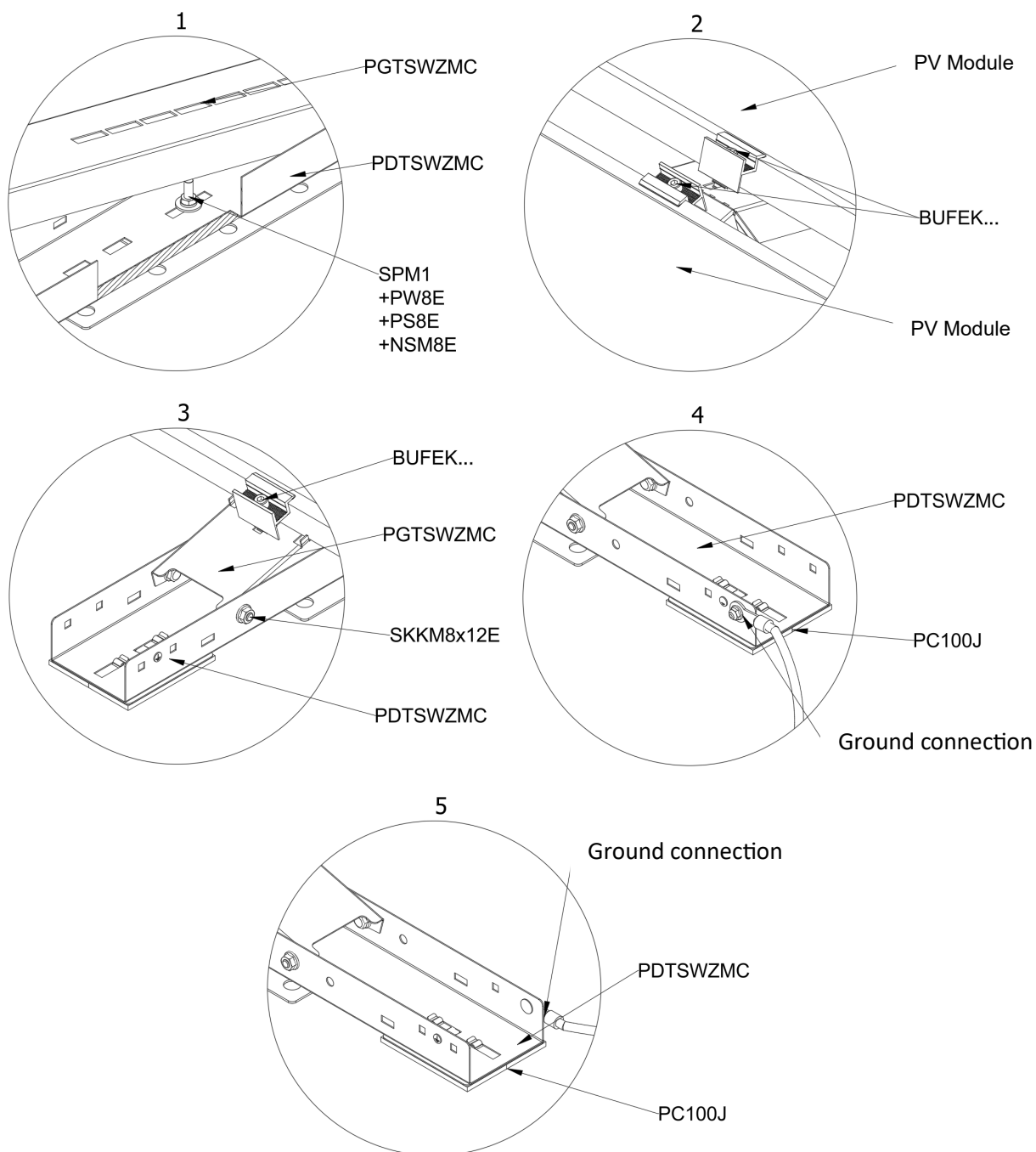
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