

INSTALLATION INSTRUCTIONS FOR THE DS-V1N STRUCTURE



Manufacturer : BAKS – Kazimierz Sielski

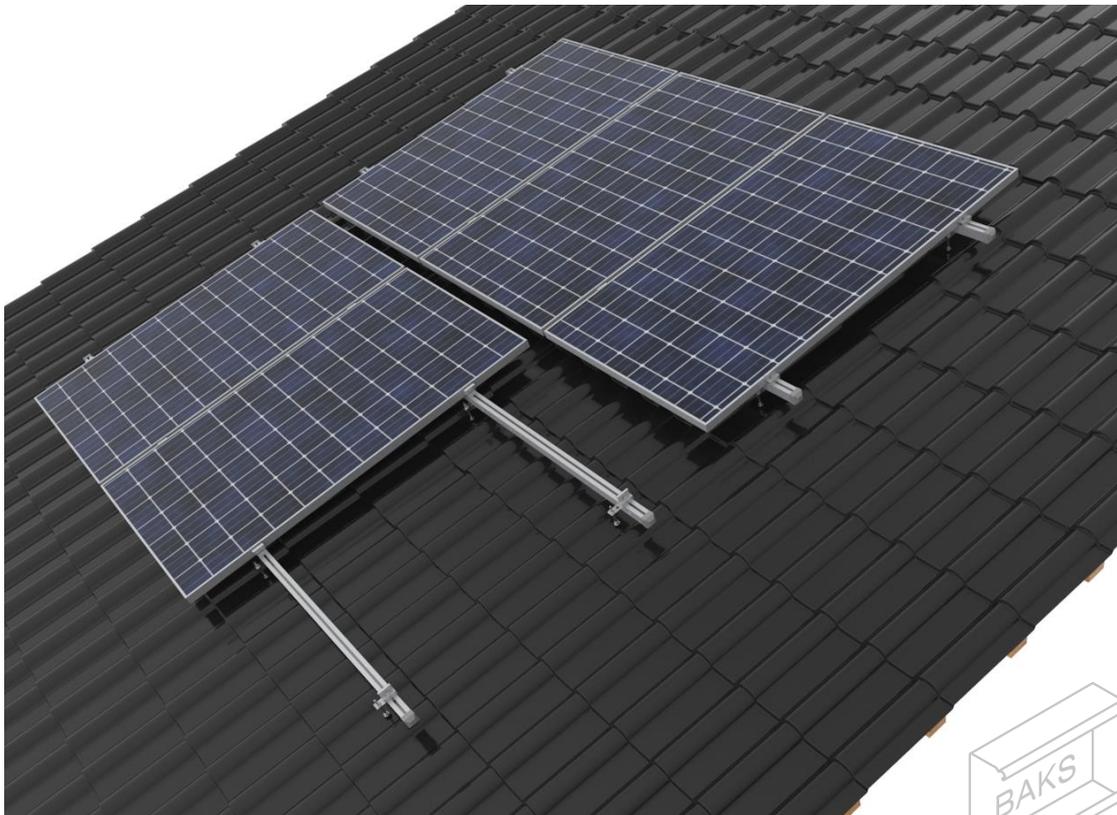
ul. Jagodne 5

05-480 Karczew

Poland

Construction for panels in a vertical arrangement (vertically).

Mounted on a sloping roof covered with metal tiles or corrugated sheet.



1. Necessary tools for assembling structures

- Allen key (ampoule) size 6
- Cordless screwdriver with speed and torque control
- Hexagonal bit, Allen size 6 for screwdriver head
- Combination spanners in sizes 13, 15, 17 mm,
- Ratchet wrench with sockets in sizes 13, 15, 17 mm,
- Extension 100-120mm for socket wrenches
- Rubber hammer
- UV-resistant roofing sealant
- Torque wrench, range 10-45 Nm

2. General information:

- Possibility of using the structure in wind and snow zones in accordance with the following standards: **EN 1991-1-3 and EN 1991-1-4.**
- **Before starting the assembly of the structure, you should read the installation instructions for photovoltaic panels**
- Cutting elements is allowed only with low-speed reciprocating saws and hand saws with tools made of high quality steel, this avoids excessive heating of the material.
- Cut edges of elements made of steel with zinc coating must be unconditionally protected – sanded with sandpaper, cleaned and degreased again, after drying protect with zinc paste with a minimum of three layers.
- Avoid mounting pressure clamps in the extreme openings of mounting profiles
- **SAM8x...E** screws with **NRM8F** nuts should be tightened with a torque of 12-14 Nm
- **SAM8x...E** screws with **NKWSM8A** nuts should be tightened with a torque of 12-14 Nm
- When twisting the **SGKFM8x20** and **SGKFM10x20PV** screws, hold the screw head with your hand in such a position that the planting is blocked on the walls of the hole in which we mount the screw, and then with the help of a screwdriver, tighten the screw slowly until it is blocked in the hole. In the final phase, tighten the screwdriver with the following torques: M8 – 22 Nm; M10 - 42 Nm.
- **SSZ10x20E** and **SRM10x...F** screws... tighten with 20 Nm torque



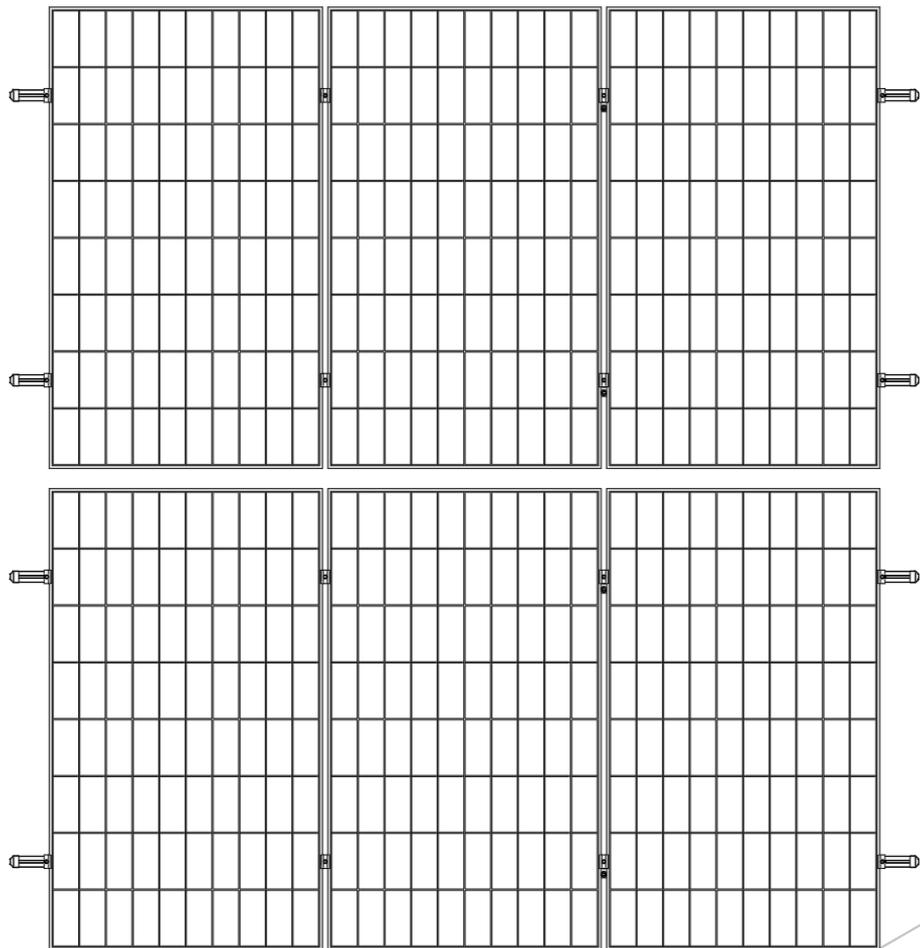
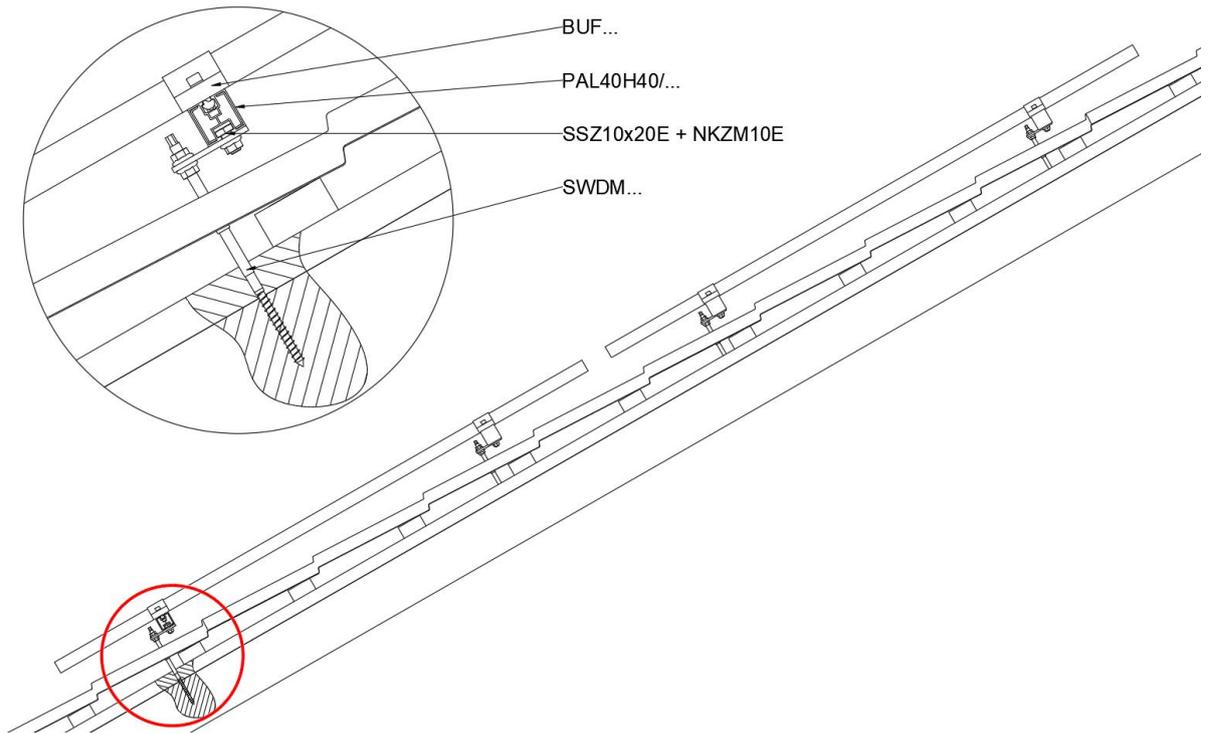
3. Assembly of the structure type DS-V1N

- Determination of the position of rafters
- Determining the position of the double-thread screws on the edge, the support profile can protrude up to 300 mm behind the double-thread screws on the edge.
- The edge of the PV panel must be at least 500 mm from the edge of the roof
- The spacing of subsequent double-threaded screws in the vertical axis depends on the mounting zones designated by the manufacturer of the panels used, in the horizontal axis they should be mounted in each rafter
- All openings in the roof sheathing should be protected with UV-resistant roofing sealant
- **PUP** grounding pads should be placed in the mounting areas of **PUF** intermediate holders
- If there is an even number of modules in a single row of construction, grounding washers are mounted every second pair of modules
- In the case of an odd number of modules, **PUP** washers should be additionally added under the **PUF** handles to ensure grounding of the last module as well

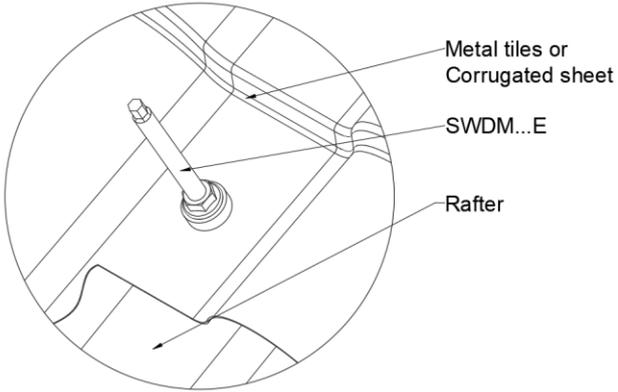
4. List of elements included in the DS-V1N structure in the version on aluminum profiles PAL40H40

Nr	Name	Product symbol	Purpose in construction
1	Aluminium profile	PAL40H40/...	Carrier profile
2	Connector	LPAN40	Aluminium profile connector
3	Double-thread screw	SWDM...E	Fastening the structure to the rafters
4	Mounting adapter	AD...E	Adapter
5	Side handle	BUF...	Side clamp fixing panels
6	Intermediate handle	PUF	Intermediate clamp fixing the panels
7	Grounding pad	PUP	Grounding of panels
8	Screw	SAM8x...E	Clamp mounting screw
9	Sliding nut	NKWSM8A	Nut
10	Spring washer	PS8E	Washer
11	Screw	SSZ10x20E	Attaching the profile to the adapter
12	Channel nut	NKZM10E	Attaching the profile to the adapter

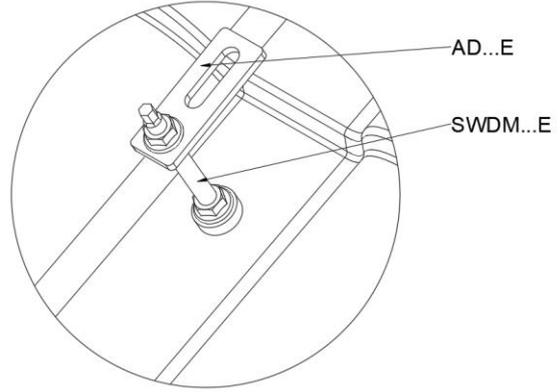




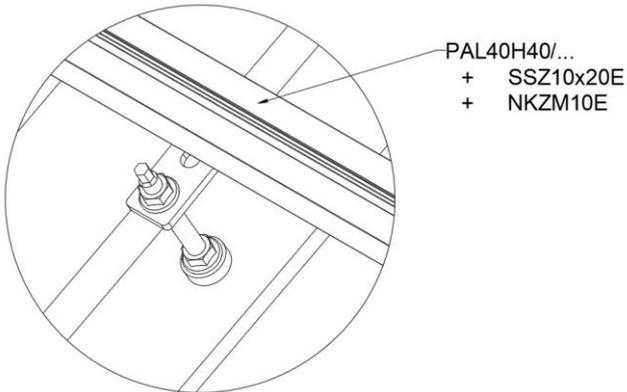
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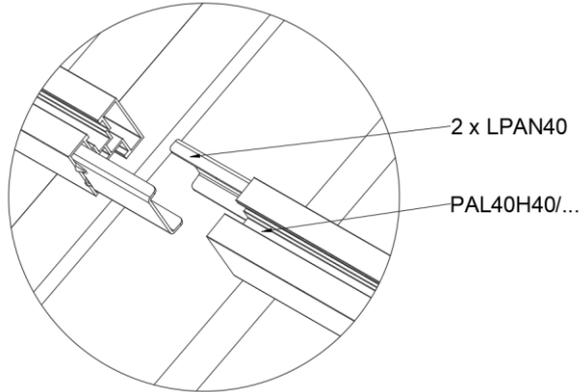
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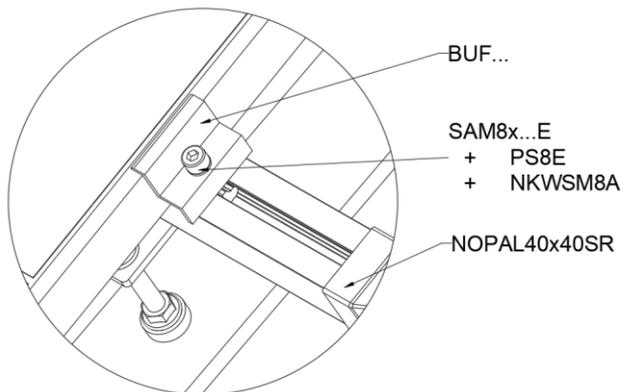
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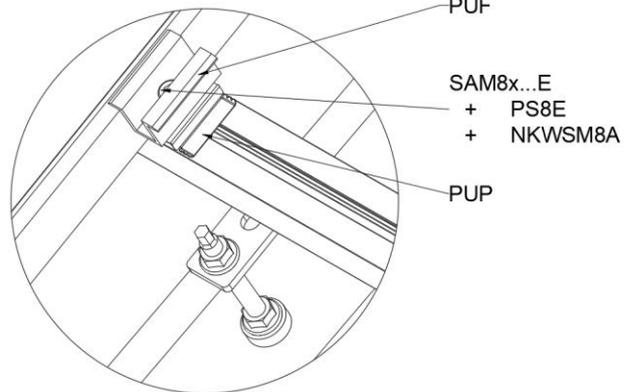
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5. List of components included in the DS-V1N construction with alternative profiles, CWP40H35 and PAL30H32

Nr	Name	Product symbol	Purpose in construction
1	Channel	CWP40H35/...MC	Profil nośny
2	Connector	LC40H35MC	Channel connector
3	Double-thread screw	SWDM...E	Fastening the structure to the rafters
4	Mounting adapter	AD...E	Adapter
5	Side handle	BUF...	Side clamp fixing panels
6	Intermediate handle	PUF	Intermediate clamp fixing the panels
7	Grounding pad	PUP	Grounding of panels
8	Screw	SAM8x...E	Clamp mounting screw
9	Channel nut	NRM8F	Nut
10	Spring washer	PS8E	Washer
11	Mushroom head screw	SGKFM...	Bolt + flange nut

- PAL30H32 aluminium profiles can be used in 1 wind zone and 1, 2, 3 snow zones
- Spacing of supports not more than 0.8 m.

Nr	Name	Product symbol	Purpose in construction
1	Aluminium profile	PAL30H32/...	Carrier profile
2	Connector	LPAN30	Aluminium profile connector
3	Double-thread screw	SWDM...E	Fastening the structure to the rafters
4	Double-thread screw	AD...E	Adapter
5	Side handle	BUF...	Side clamp fixing panels
6	Intermediate handle	PUF	Intermediate clamp fixing the panels
7	Grounding pad	PUP	Grounding of panels
8	Screw	SAM8x...E	Clamp mounting screw
9	Sliding nut	NKWSM8A	Nut
10	Spring washer	PS8E	Washer
11	Screw	SSZ10x20E	Attaching the profile to the adapter
12	Channel nut	NKZM10E	Attaching the profile to the adapter



