

# INSTALLATION INSTRUCTIONS FOR THE DS-V3N STRUCTURE



Manufacturer: BAKS – Kazimierz Sielski

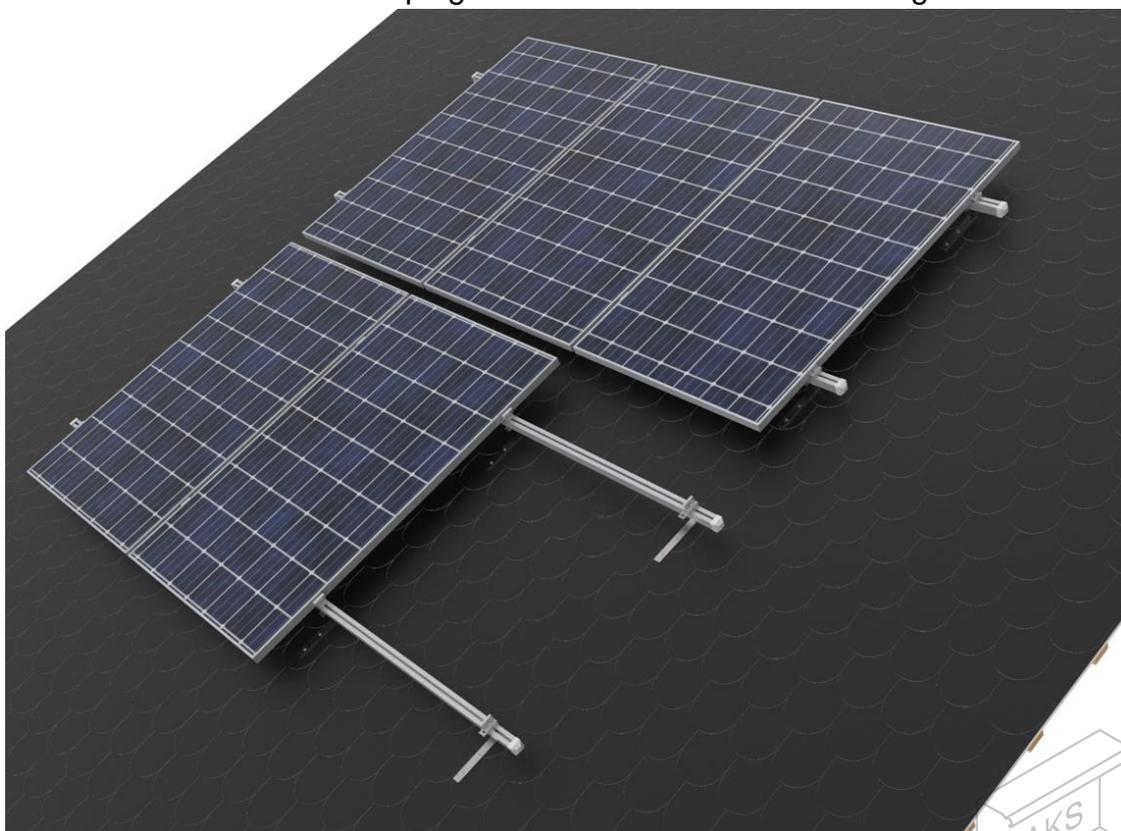
ul. Jagodne 5

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Construction for panels in a vertical arrangement (vertically).

Mounted on a sloping roof covered with bitumen shingles.



## 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



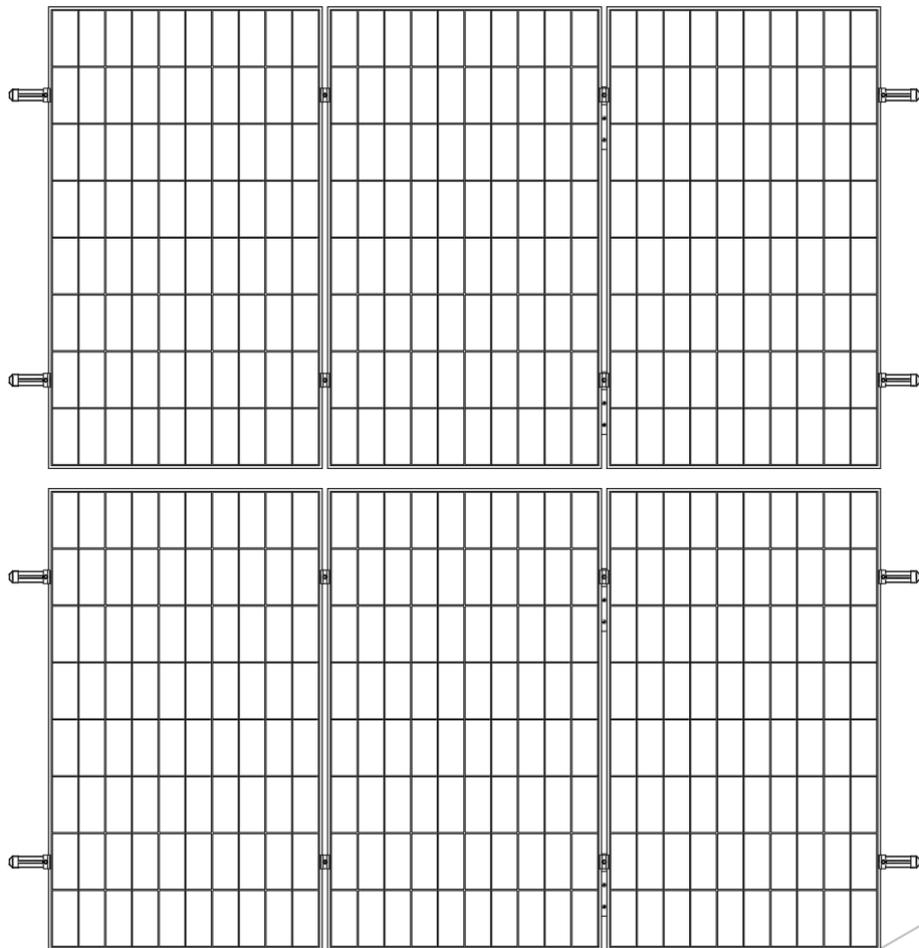
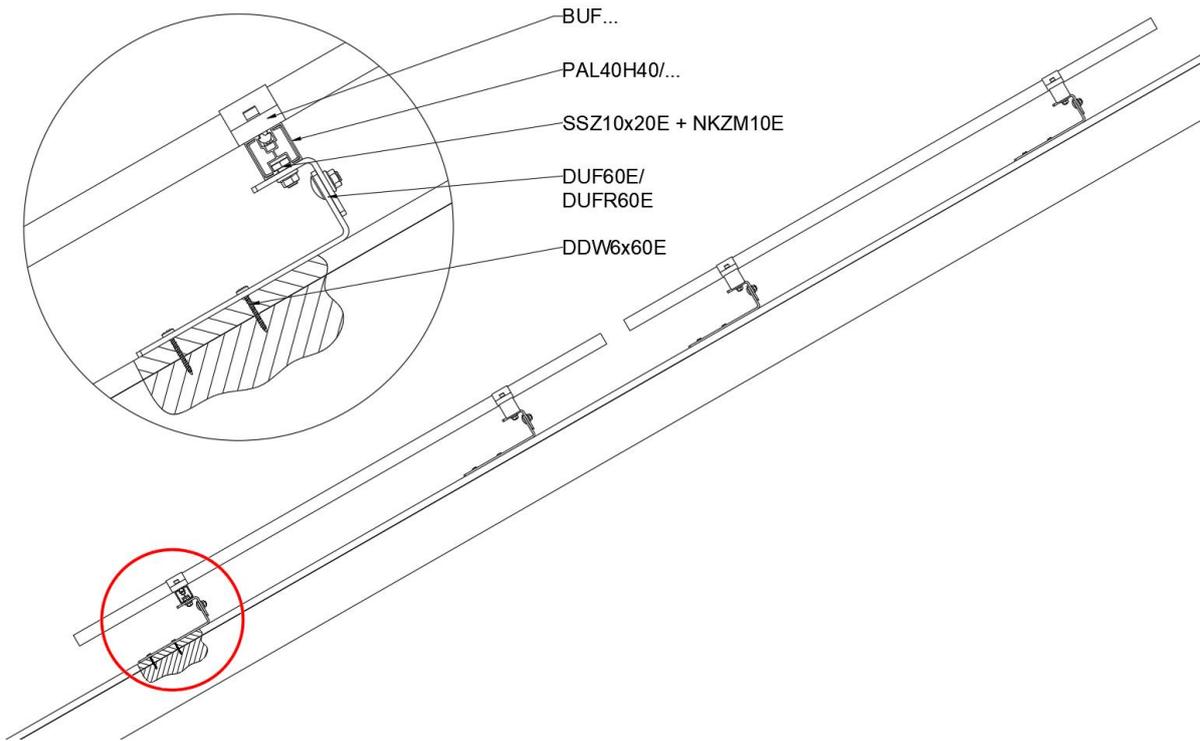
### 3. Assembly of structures DS-V3N

- Determination of the position of rafters
- Determining the position of the roof brackets on the edges, the support profile can protrude up to 300 mm behind the extreme handles.
- The place of installation of the handle should be cleaned, lubricated with bitumen mass enabling the holder to be glued to the roof, and then tighten with DDW6x60E screws to obtain the appropriate strength of the connection
- The edge of the PV panel must be at least 500 mm from the edge of the roof
- The spacing of subsequent brackets in the vertical axis depends on the mounting zones designated by the manufacturer of the panels used, in the horizontal axis should be mounted in a maximum of 1.2 m.
- **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

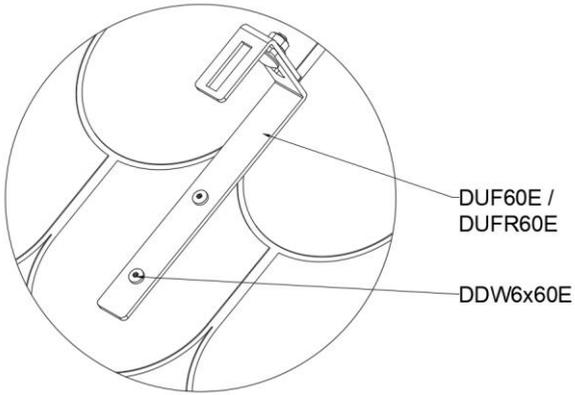
### 4. List of elements included in the DS-V3N construction in the version on aluminum profiles PAL40H40.

Nr	Name	Product symbol	Purpose in construction
1	Aluminium profile	PAL40H40/...	Carrier profile
2	Connector	LPAN40	Aluminium profile connector
3	Roof bracket	DUF60RE... / DUF60E...	Fastening the structure to the roof
4	Wood screw	DDW6x60E	Fastening the structure to the roof
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 seam holder
12	Rhombic nut	NKZM10E	Attaching the profile to the seam holder

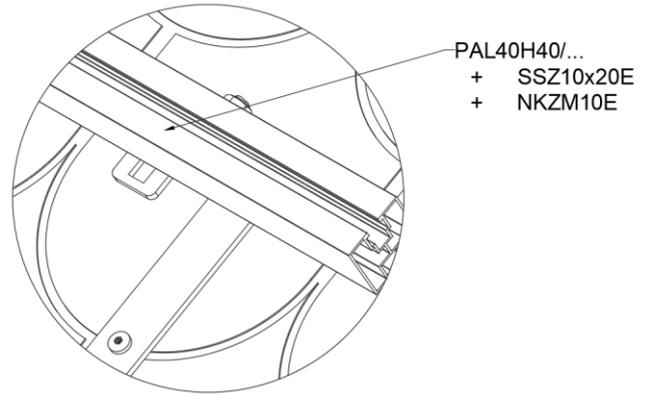




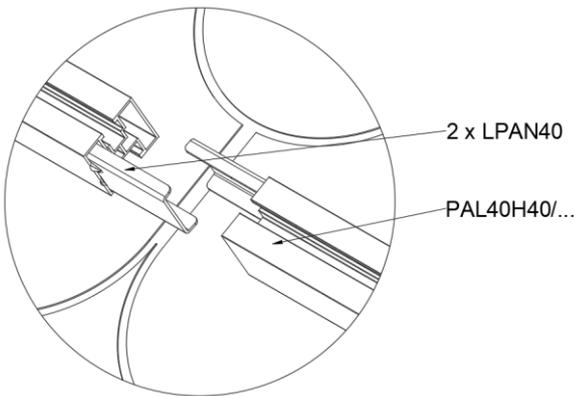
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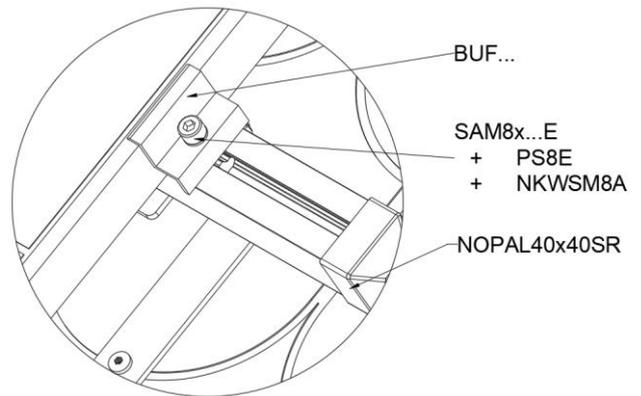
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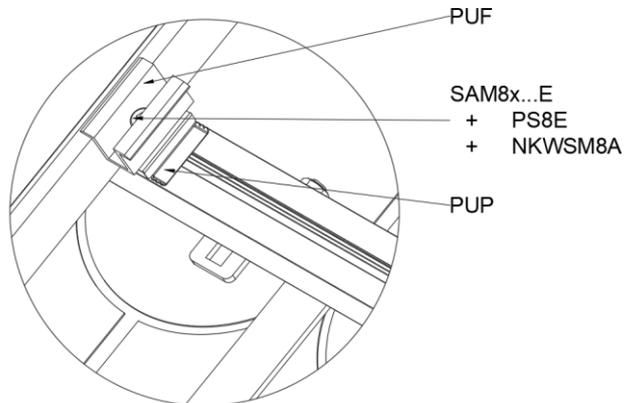
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## 5. List of components included in the DS-V3N design with alternative profiles

Nr	Name	Product symbol	Purpose in construction
1	Channel	CWP40H35/...MC	Carrier profile
2	Connector	LC40H35MC	Channel connector
3	Roof bracket	DUF60RE... / DUFR60E...	Fastening the structure to the roof
4	Wood screw	DDW6x60E	Fastening the structure to the roof
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/...	Profil nośny
2	Connector	LPAN30	Łącznik profilu aluminiowego
3	Roof bracket	DUF60RE... / DUFR60E...	Fastening the structure to the roof
4	Wood screws	DDW6x60E	Fastening the structure to the roof
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 seam holder
12	Channel nut	NKZM10E	Attaching the profile to the seam holder



