

INSTALLATION INSTRUCTIONS FOR THE DS-V2N STRUCTURE



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Construction for panels in a vertical arrangement (vertically).

Mounted on a sloping roof covered with seam 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



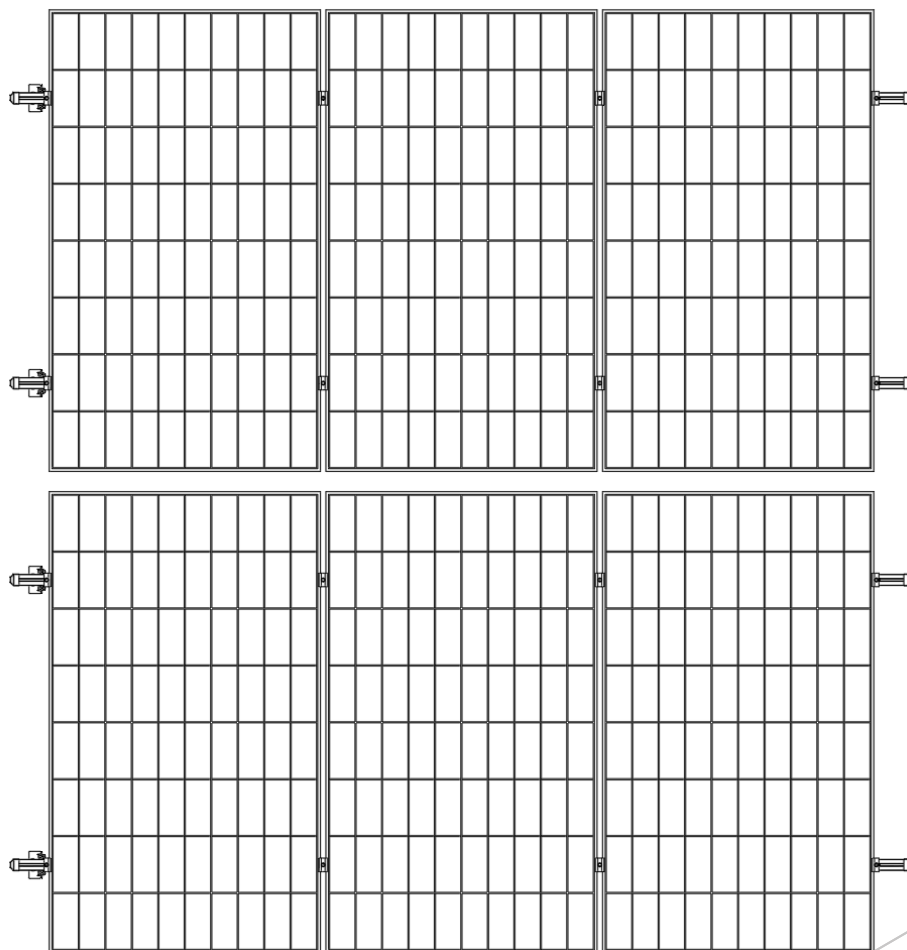
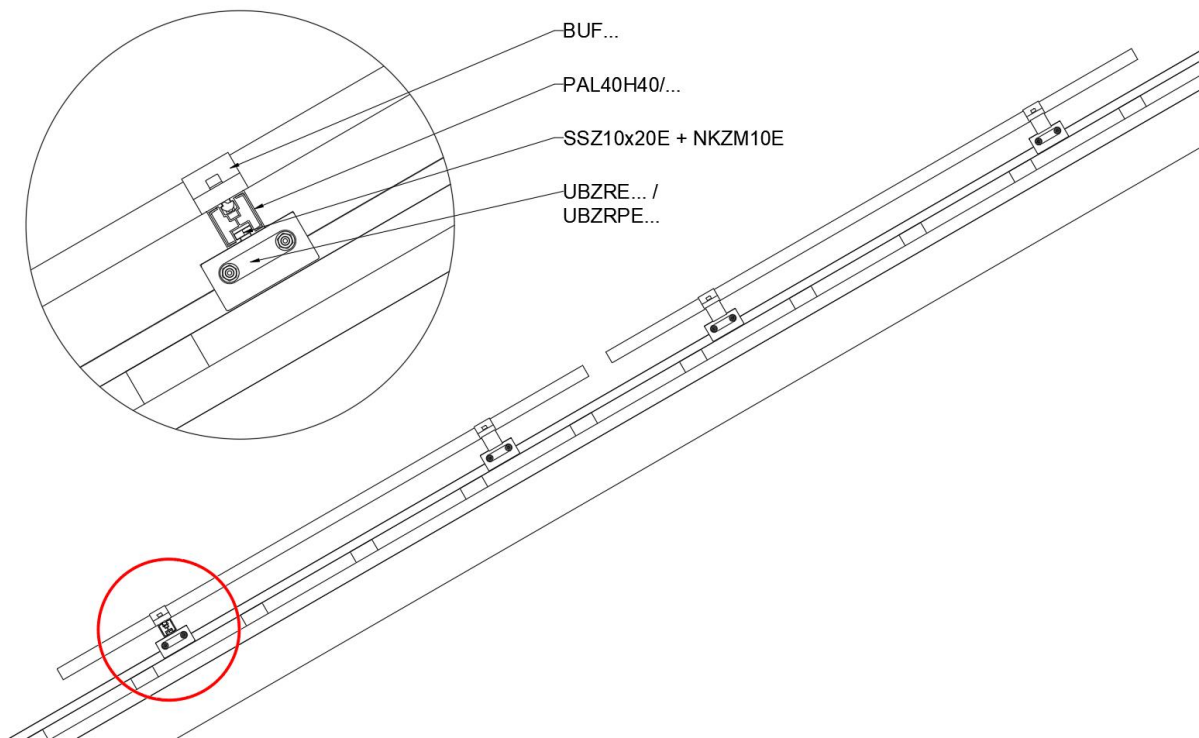
3. Assembly of the structure type DS-V2N

- Determining the position of the extreme seam holders, the support profile can protrude up to 300 mm behind the extreme handles.
- 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 they should be mounted up to 1.2 m
- **In each row of construction, the handles at the ends should be compacted, mounted with a spacing of not more than 1 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, it should be additionally under the edge side handles **PUF** add **PUP** washers to ensure grounding of the last module as well
- **PUF** add **PUP** washers to ensure grounding also of the last module

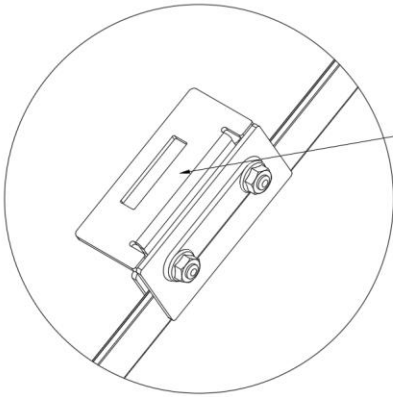
4. List of elements included in the DS-V2N structure in the version on aluminum profiles PAL40H40

Nr	Name	Product symbol	Purpose in construction
1	Aluminium profile	PAL40H40/...	Carrier profile
2	Connector	LPAN40	Aluminium profile connector
3	Sheet metal holder with standing seam	UBZRE... / UBZRPE...	Fastening the structure to the roof
4	Side handle	BUF...	Side clamp fixing panels
5	Intermediate handle	PUF	Intermediate clamp fixing the panels
6	Grounding pad	PUP	Grounding of panels
7	Screw	SAM8x...E	Clamp mounting screw
8	Sliding nut	NKWSM8A	Nakrętka
9	Spring washer	PS8E	Washer
10	Screw	SSZ10x20E	Attaching the profile to the seam holder
11	Channel nut	NKZM10E	Attaching the profile to the seam holder



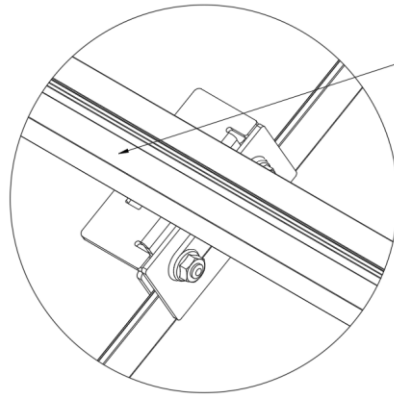


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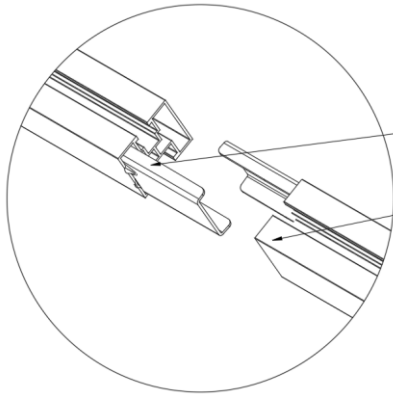
UBZRE... \\
UBZRPE

2



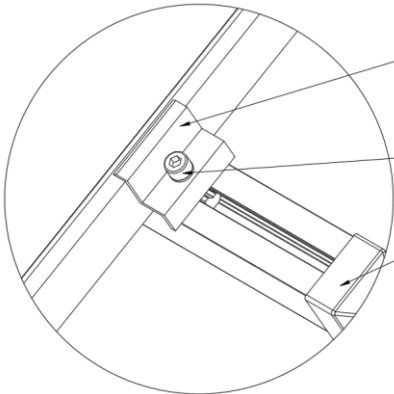
PAL40H40/...
+ SSZ10x20E
+ NKZM10E

3



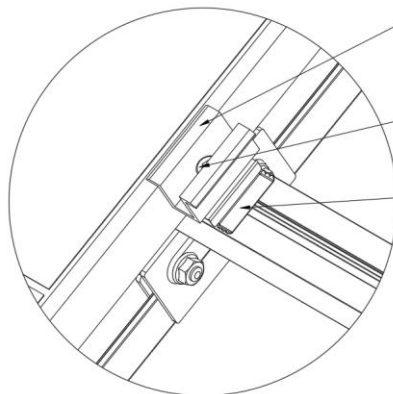
2 x LPAN40
PAL40H40/...

4



BUF...
SAM8x...E
+ PS8E
+ NKWSM8A
NOPAL40x40SR

5



PUF
SAM8x...E
+ PS8E
+ NKWSM8A
PUP



5. List of components included in the DS-V2N construction version with alternative profiles, CWP40H35 and PAL30H32

Nr	Name	Product symbol	Purpose in construction
1	Channel	CWP40H35/...MC	Carrier profile
2	Connector	LC40H35MC	Channel connector
3	Sheet metal holder with standing seam	UBZRE... / UBZRPE...	Fastening the structure to the roof
4	Side handle	BUF...	Side clamp fixing panels
5	Intermediate handle	PUF	Intermediate clamp fixing the panels
6	Podkładka uziemiająca	PUP	Grounding of panels
7	Śruba	SAM8x...E	Clamp mounting screw
8	Rhombic nut	NRM8F	Nut
9	Spring washer	PS8E	Washer
10	Screw	SSZ10x20E	Attaching the profile to the seam holder
11	Channel nut	NKZM10E	Attaching the profile to the seam holder

- 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	Sheet metal holder with standing seam	UBZRE... / UBZRPE...	Fastening the structure to the roof
4	Side handle	BUF...	Side clamp fixing panels
5	Intermediate handle	PUF	Intermediate clamp fixing the panels
6	Grounding pad	PUP	Grounding of panels
7	Screw	SAM8x...E	Clamp mounting screw
8	Sliding nut	NKWSM8A	Nut
9	Spring washer	PS8E	Washer
10	Screw	SSZ10x20E	Attaching the profile to the seam holder
11	Channel nut	NKZM10E	Attaching the profile to the seam holder



