

INSTRUCTIONS FOR ASSEMBLY OF STRUCTURES FOR PHOTOVOLTAIC CARPORT

1A. INSTALLATION PREPARATION

In order to assess the location of the installation, apart from geometric elements and orientation in space, a list of additional factors influencing the final assessment should be analyzed, such as:

- * Angle of inclination
- * Azimuth
- * Presence of trees, poles and other tall landscape elements
- * Distance from other buildings
- * Distance from dangerous and endangered zones

1B. PREPARATION OF THE INSTALLATION SITE

The installation site should be flat, possibly with a slight inclination angle of up to 5% from the ground level. All concrete elements should be level so as not to cause any shifts in relation to the ground and to ensure stability.

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2a. FIXING THE PREFABRICATED FOUNDATION TO THE SUBSTRATE

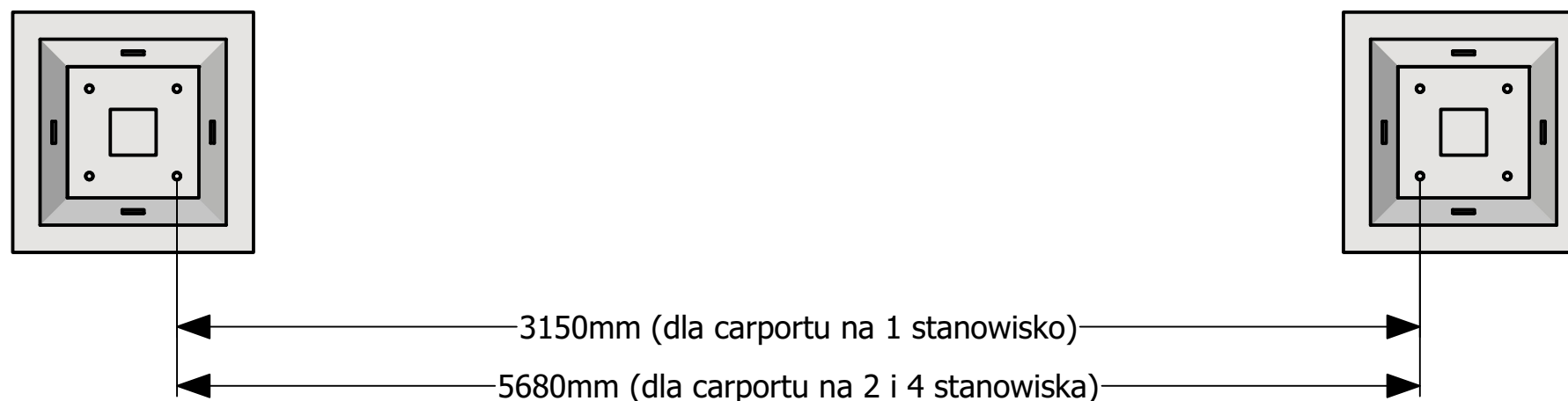
In case of installation on a prefabricated bench, a trench must be prepared for the prefabricated elements.

The prefabricated footing should be assembled and placed symmetrically to each other. The footing must be in the same plane to prevent the structure from tilting to one of the sides. It is also necessary to ensure that the substrate for the prefabricated benches has the same density and quality to prevent possible deformations or cracks.

If necessary, the substrate should be compacted by tamping or preparing a bedding.

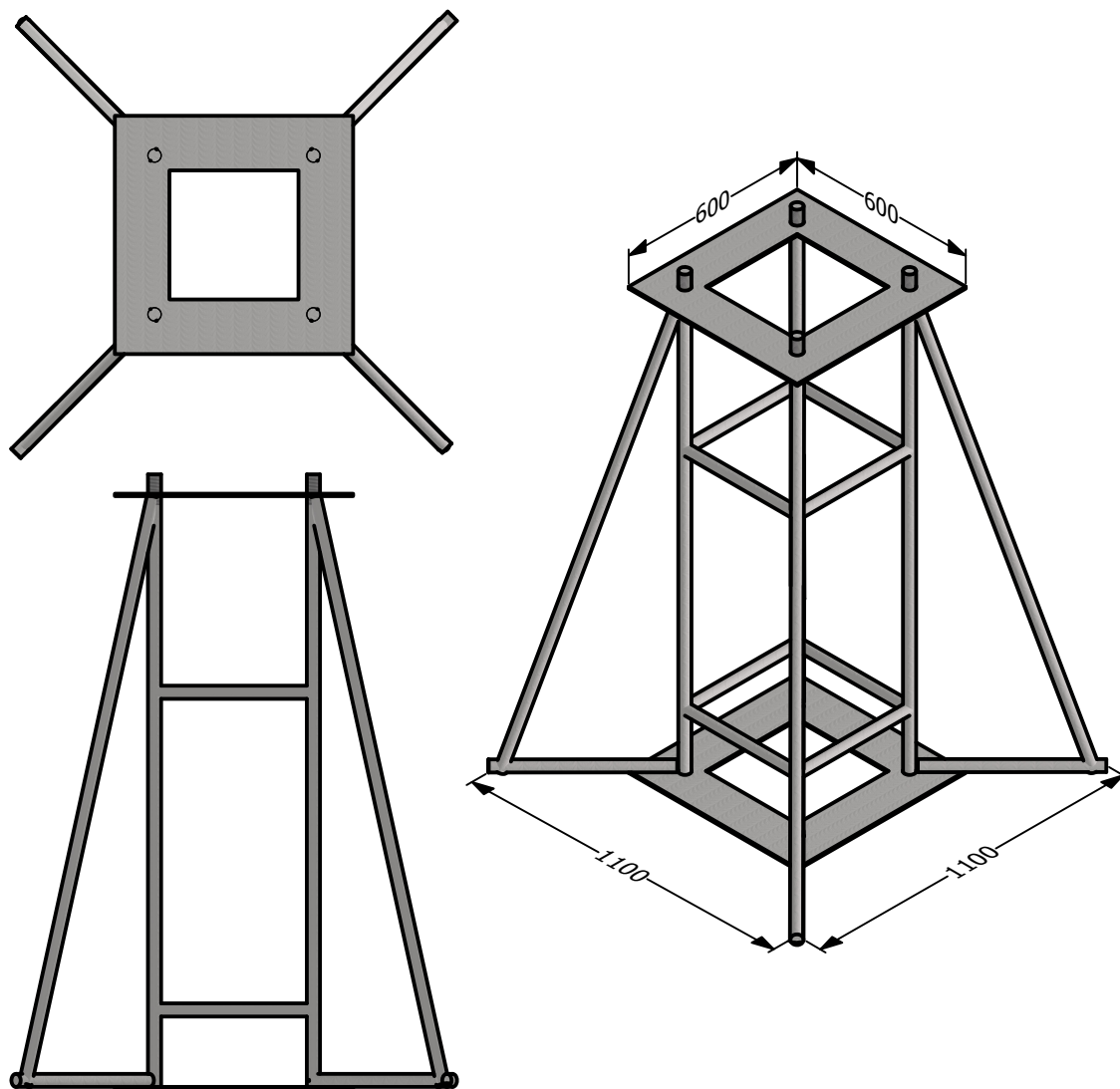
The distance between the purlins set in concrete should be as shown in the drawing:

For a carport for 1 station 3170mm, for a carport for 2 and 4 stations 5700mm.



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2b. FOOTING FOR THE FOUNDATION FOR FIXING POLES.



A ring foundation can be used as an alternative to a prefabricated foundation.

The weight of the foundation after pouring the ring with concrete is approximately 1600 kg.

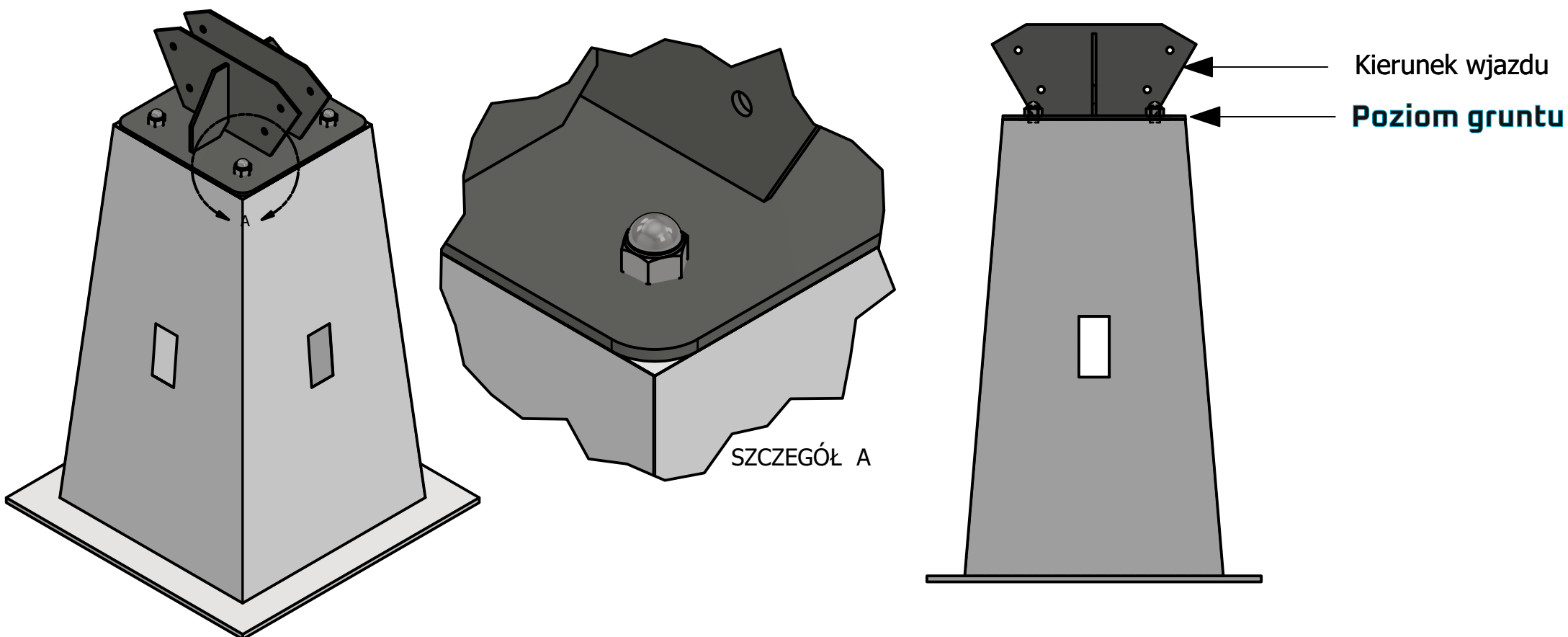
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3. INSTALLATION OF VERTICAL SUPPORTS

All work should be done by two people.

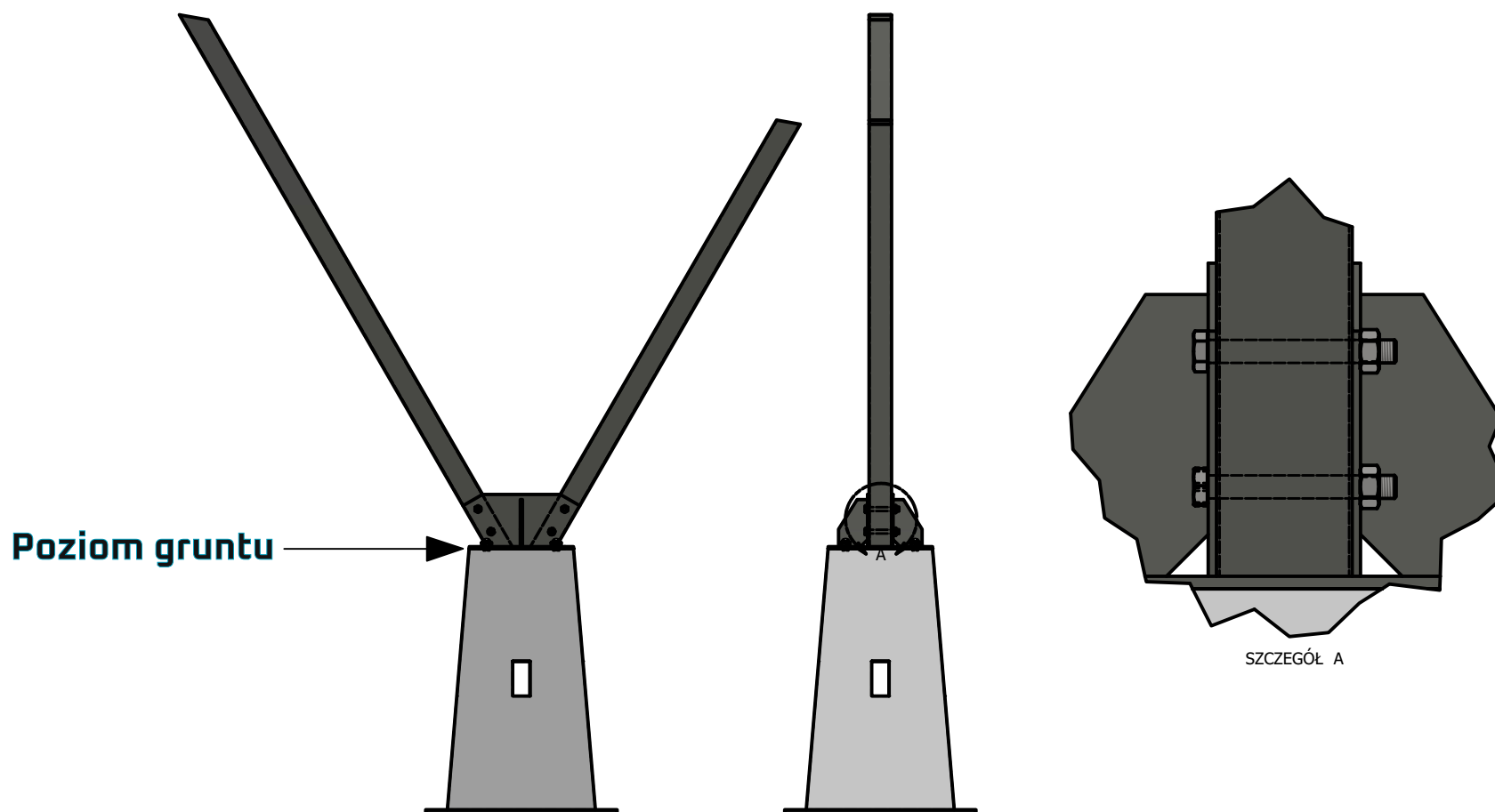
A. To a fixed, prefabricated foundation

Bracket is mounted using M-33 cap nuts to the protruding threaded rods.



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B. The bracket are mounted to the foot using M-20*180 hexagonal screws and nuts.

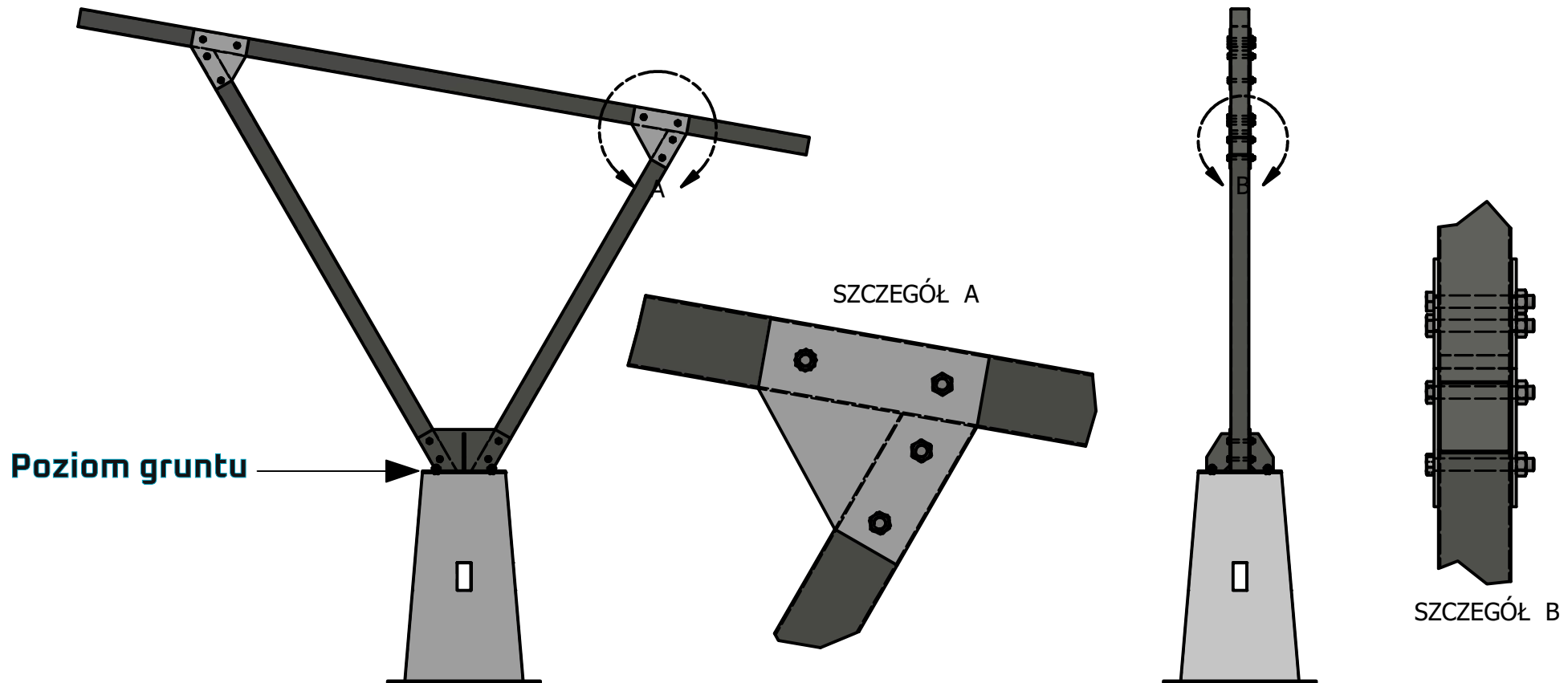


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4. INSTALLATION OF BOLTS

Before installation, check the spacing of the supporting supports relative to each other and whether the supports are mounted in a vertical position.

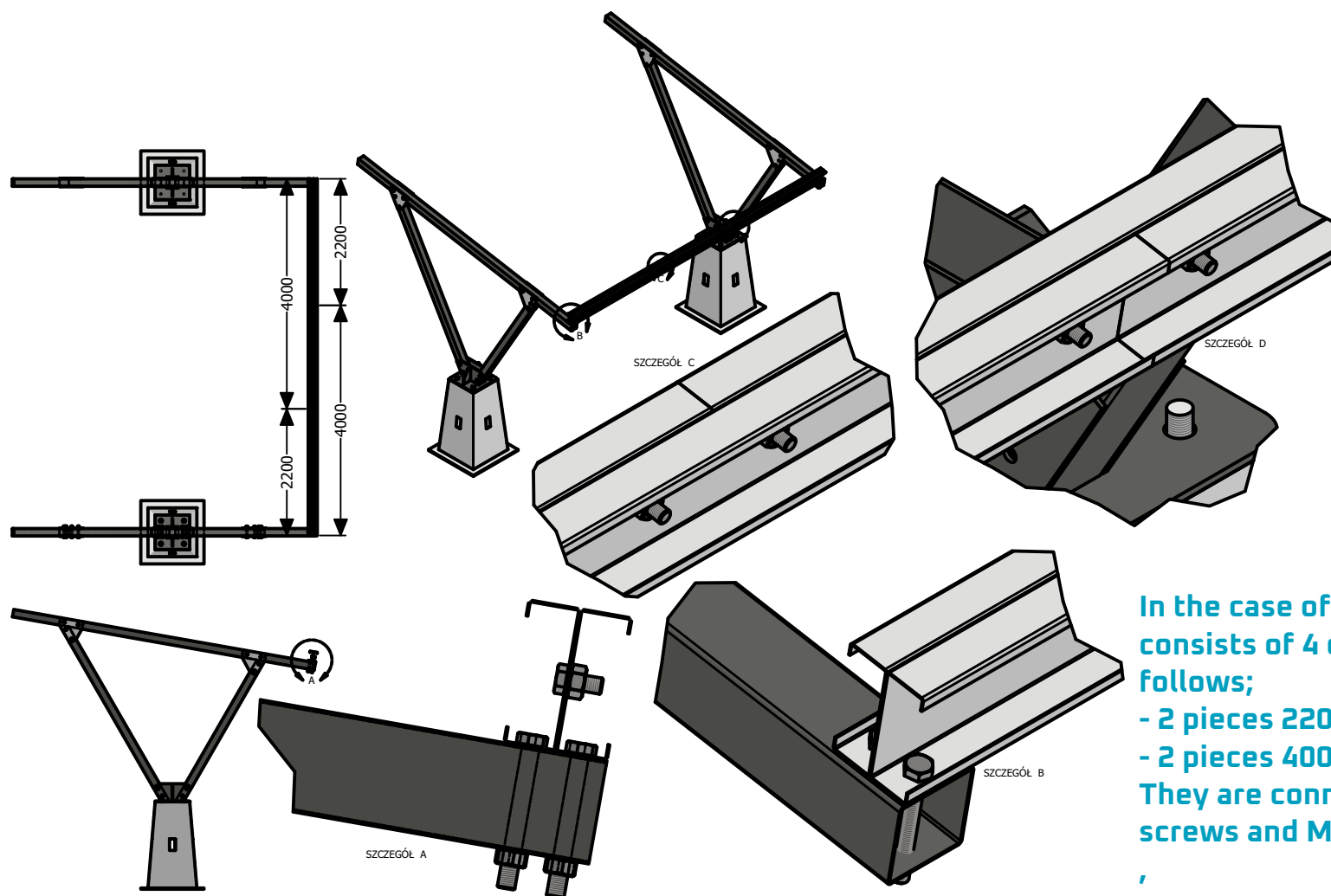
We place the bracket on two columns and connect them with a node element using M-20*180 screws and nuts.



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5. PURLIN INSTALLATION

The purlin is attached directly to the bolt using M-12*180 screws at optimal distances for the modules indicated by the drillings. Place the purlin so that the holes in both elements coincide and fasten with screws - Detail A.



In the case of a single-station unit, the purlin consists of 4 elements with the lengths as follows;

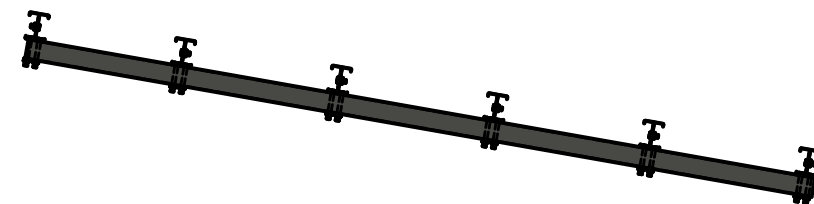
- 2 pieces 2200 mm
- 2 pieces 4000 mm

They are connected together with M10x45 screws and M10 nuts..

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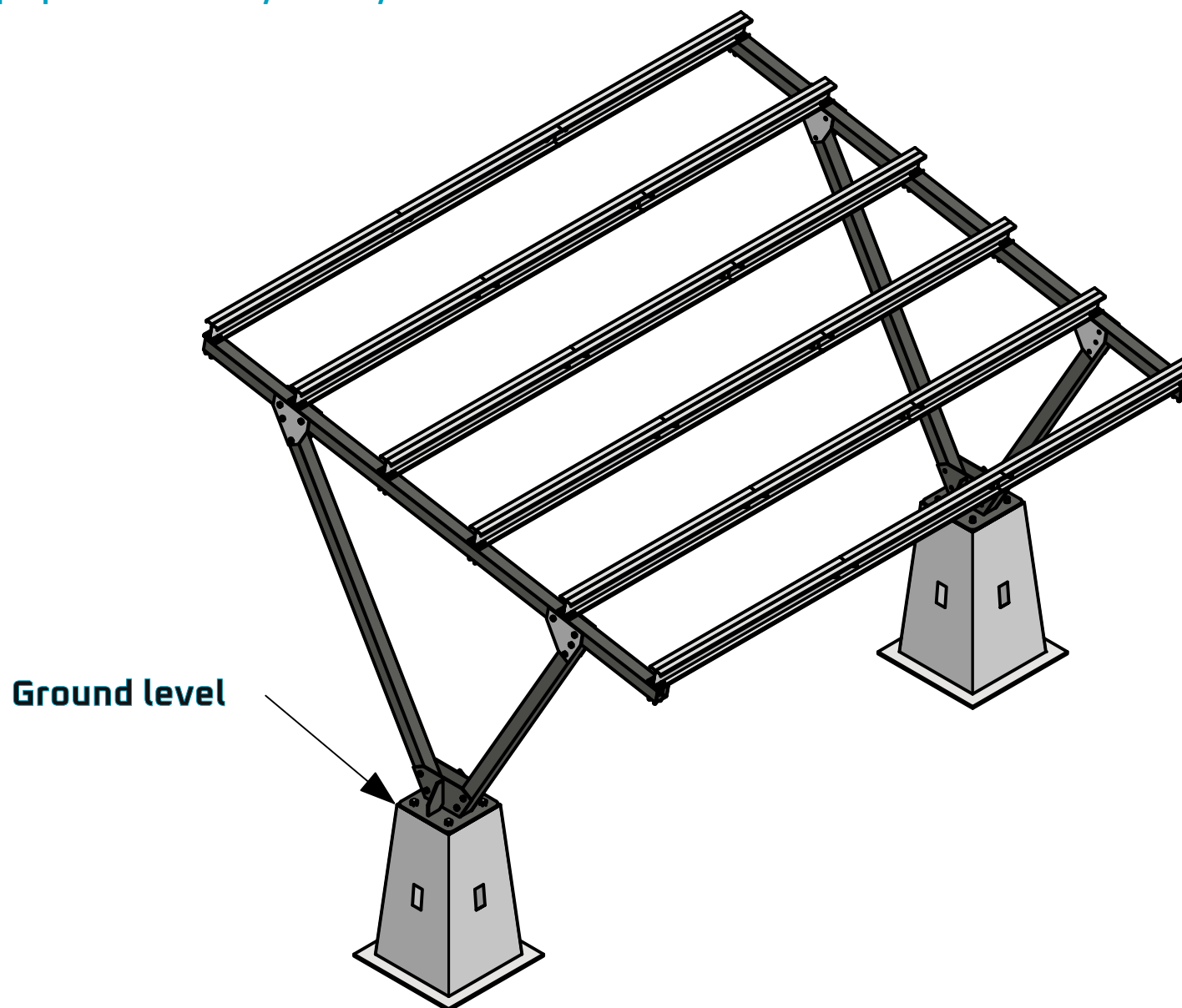
5. PURLIN INSTALLATION

Please check the required support points for the modules used in the installation instructions of the photovoltaic module manufacturer. The installed purlins will constitute a structural matrix to which the modules will be attached.



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The structure prepared in this way is ready for installation of modules and other elements.



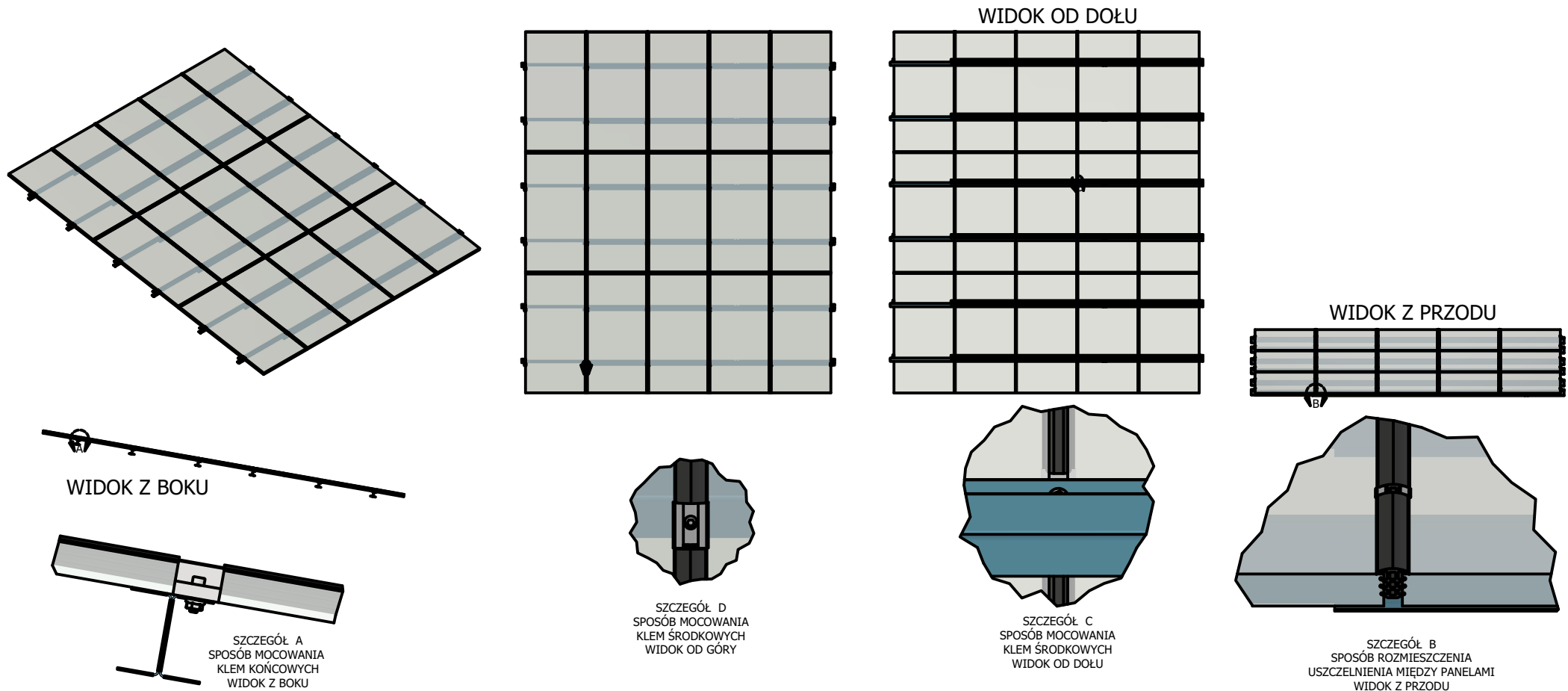
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6A. INSTALLING OF MODULES VERTICALLY

Lightly attach the end clamps to the slots located on the mounting purlins using M8 Allen screws.

They cannot be tightened tightly due to the need to adjust the modules. The free slots will be occupied by the middle clamps, which distance two adjacent modules from each other.

In the last step, we place the modules on the structure and, after properly positioning them, tighten the middle and end clamps.



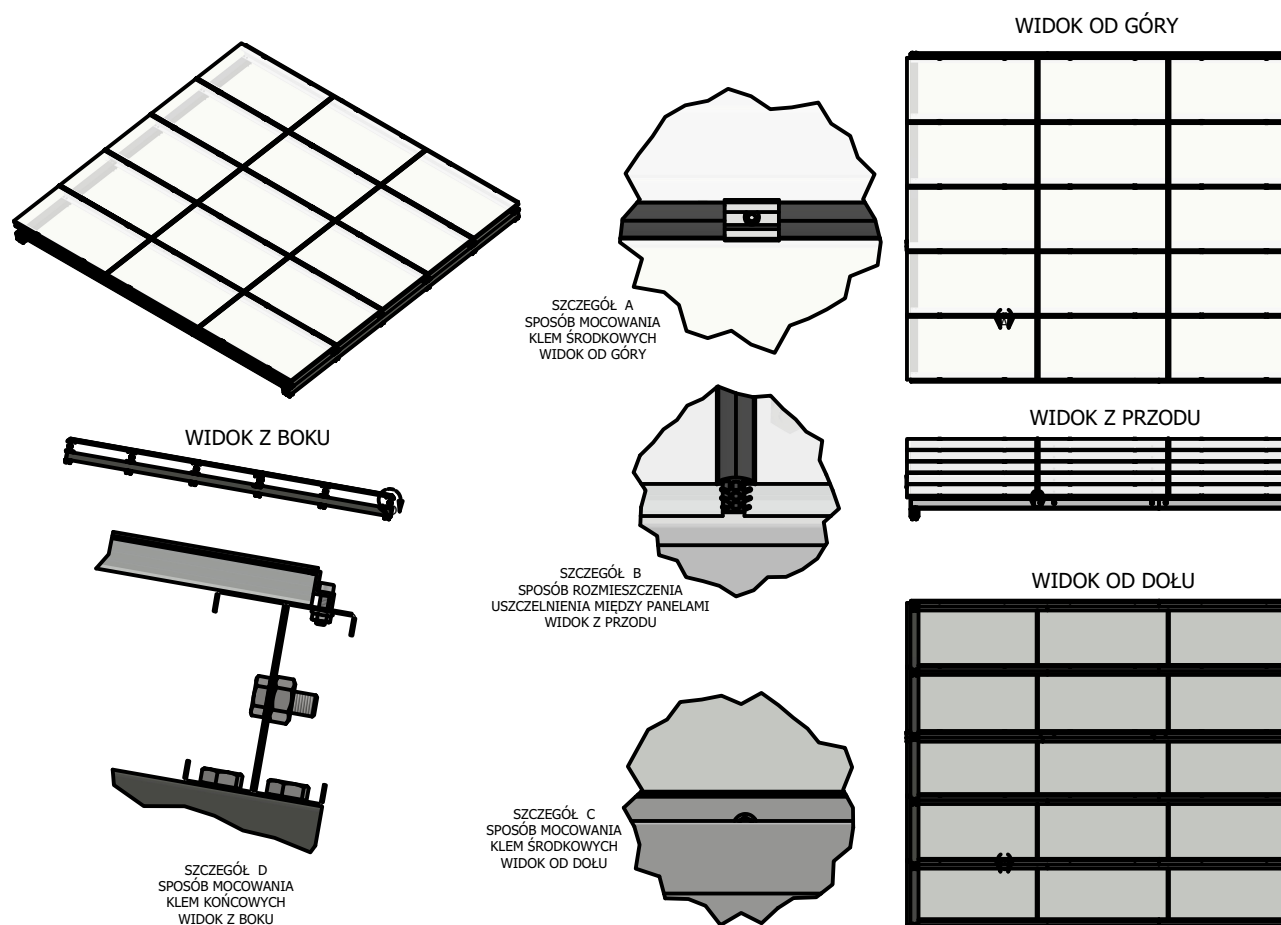
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6B. INSTALLATION OF MODULES HORIZONTALLY

Lightly attach the end clamps to the slots located on the mounting purlins using M8 Allen screws.

They cannot be tightened tightly due to the need to adjust the modules. The free slots will be occupied by the middle clamps, which distance two adjacent modules from each other.

In the last step, we place the modules on the structure da, after properly positioning them, tighten the middle and end clamps.



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