

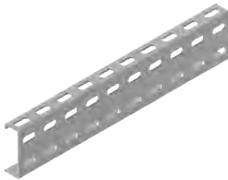
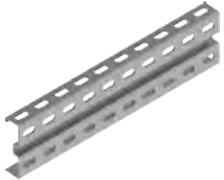
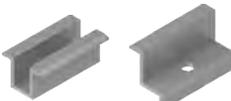
Freestanding mounting structures for the installation of photovoltaic panels



Freestanding structures systems:

- System: **W-V2G1** (2 panels arranged vertically on 1 support posts)
- System: **W-V2G1-WZ** (2 panels arranged vertically on 1 support posts, 2 constructions with panels oriented to the east and west)
- System: **W-V2G2** (2 panels arranged vertically on 2 support posts)
- System: **W-H3G1** (3 panels arranged horizontally on 1 support posts)
- System: **W-V3G2** (3 panels arranged vertically on 2 support posts)
- System: **W-H4G2** (4 panels arranged horizontally on 2 support posts)
- System: **W-H4G2-BI** (4 panels arranged horizontally on 2 support columns with bifacial panels)
- System: **W-H5G2** (5 panels arranged horizontally on 2 support posts)
- System: **W-H6G2** (6 panels arranged horizontally on 2 support posts)

Examples of system components:

 <p>Profile BDFC100...MC</p>	 <p>Profile BDFCH120...MC</p>	 <p>Support Channel CWC100H50...MC</p>	 <p>Channel Connector LKTT45H70MC</p>
 <p>Base Plate WPCWE...</p>	 <p>Channel Connector LCPT11MC</p>	 <p>Channel Connector LCPE11DMC</p>	 <p>Middle and Side Holders PUF and BUF...</p>

Advantages of freestanding structures for the installation of photovoltaic panels

- dense profile perforation provides a wide adjustment range without drilling
- longitudinal profile perforation allows for smooth adjustment of the inclination angle of the structure -
- possibility of assembling the structure - with only one type of screws - SGKFM10x20
- the perforation of the profiles reduces the weight of the structure - without reducing their strength properties. This means that installers do not have to carry heavy profiles and their work is more efficient.
- dense perforation allows panels to be mounted anywhere without drilling
- if it is not possible to mount the clamp to the profile as standard, there is a possibility to use the UPPMC holder and to grapple on the edge of the profile CMC100H50, which gives a stable fixing of the panel to the structure -
- by using a C-profile, cables can be laid in it safely
- the top perforation of the CWC100H50 profile allows for the installation of both click and standard screw clamps
- longitudinal perforation of support profiles allows for quick installation of brackets and cable trays for safe cable routing and installation of structures for inverters
- possibility to make legs with different sheet thicknesses (3 and 4 mm) depending on the quality of the soil
- production of profiles is carried out on top-class perforating machines, which ensures high quality and repeatability of the products. Profile ends are virtually free of sharp edges, which significantly reduces the possibility of installer's injuries
- profiles made of sheet metal with Magnelis® coating for long-term corrosion resistance
- products made in Poland!

Systems:



W-V2G1-30°



W-V2G1-WZ-10°



W-H3G1-30°



W-H4G2-30°



W-H4G2-BI-30°



W-H5G2-30°



W-H6G2-30°



W-V2G2-30°



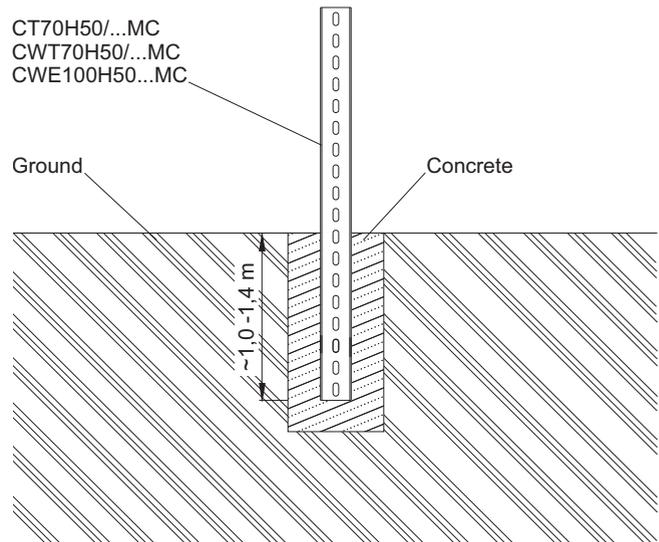
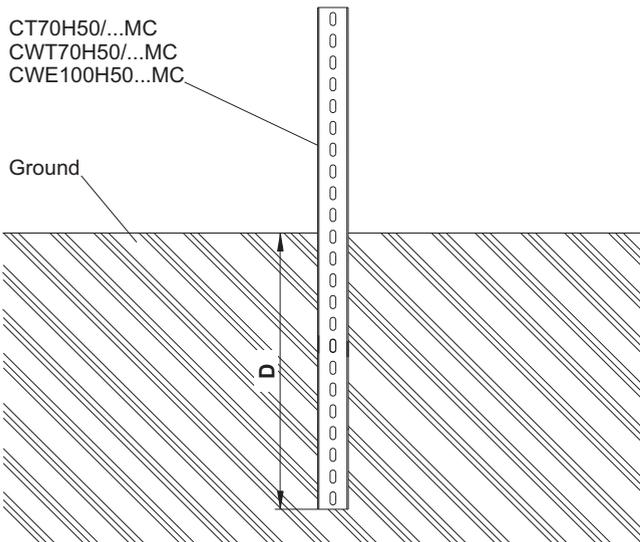
W-V3G2-30°

Recommended ways of mounting freestanding structures to the ground

Construction assembly variants:

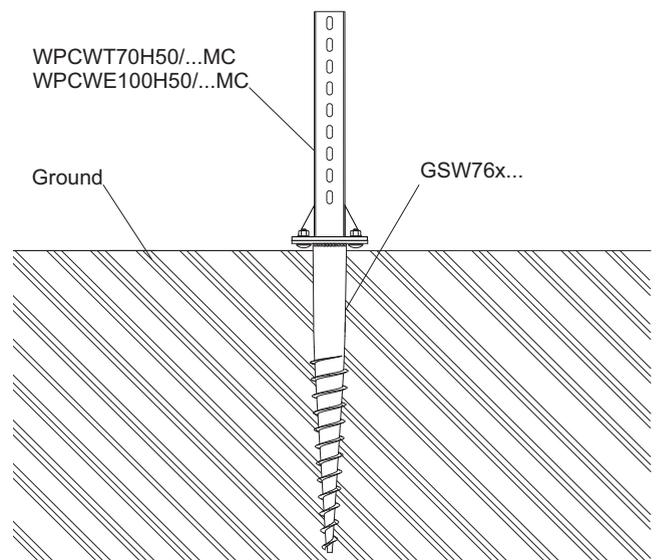
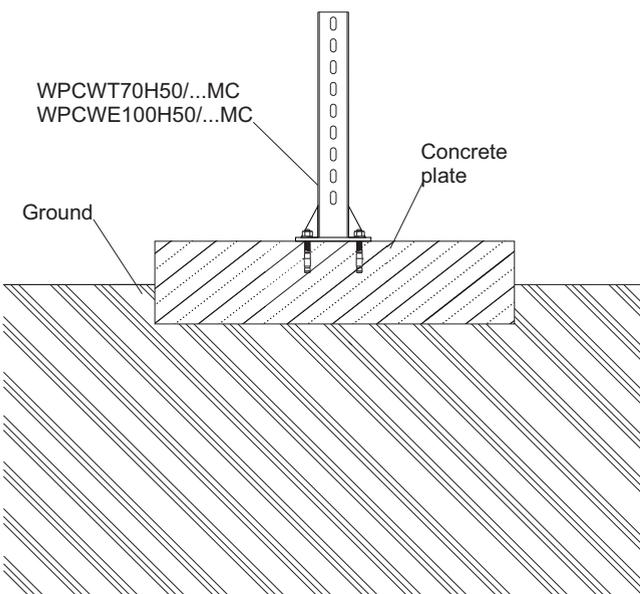
G - construction rammed into the ground:
 - support posts rammed into the ground by means of pile drivers
 (D - the ramming depth of the posts is determined individually depending on the soil quality at the installation site and on wind and snow conditions)

B - construction poured with concrete:
 - support posts poured with concrete min. B20 in the holes made in the ground (dimensions of the holes determined individually, depending on the type of applied structure - as well as wind and snow conditions at the installation site)



K - anchored structure -
 - support posts anchored to concrete foundation
 - possibility of applying mechanical and chemical anchors

S - screwed structure -
 - screws screwed into the ground for fixing the of the support posts
 - screwed in manually by means of appropriate extensions or by means of manual or self-driving devices for screwing ground screws





Mounting structure - for the installation of photovoltaic panels

- freestanding

System: **W-V2G1-30°** (optionally 25°)



Structure - description:

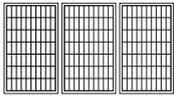
Complete support system for fixing two rows of panels in a vertical arrangement

Technical description:

Materials of the support system:
MC- constructional steel in grades S250GD and S350GD in Magnelis® coating, ZM430 for support posts, ZM310 for assembled parts above ground
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
 Structure - tested for strength

Arrangement of the modules:

- vertical - V



Ground conditions:

• soil with good/high load capacity

Construction assembly variants:

- W-V2G1 structure - rammed into the ground (anchorage depth depends on ground conditions)
- W-V2K1 structure - support posts anchored to the concrete foundation
- W-V2B1 structure - support posts poured with concrete, min. B20 in the holes in the ground (size of the foundation depends on the ground conditions)
- W-V2S1 structure - on request, a screw screwed into the ground for fixing of the support posts

Warranty

BAKS provides a 10 year warranty period for the components included in the support structure - only if all conditions of the manufacturer's warranty are met. The warranty can be extended.

Detail A

The figure shows an example of the arrangement of the concentration points of the structure -

Component list for W-V2G1-30°

CODE	40 panels (~1700/1000mm)	
	pcs	
CWE100H50/3,6MC	7	
BDFCH100/2,75MC	7	
CMP41H41/1,2MC	7	
CMP41H41/1,7MC	7	
CMP41H21/3,5MC	6	
LCPE11DMC	7	
LCCNMC	8	
SGKFM10x20	176	
CWC100H50/6,6MC	8	
CWC100H50/4,4MC	8	
LKTT45H70MC	12	
BUF...	8	
PUF	76	
SAM8x...E	84	
NKZM8E	84	

Detailed information on the products can be found on pages 47-75



Mounting structure - for the installation of photovoltaic panels

- freestanding

System: **W-V2G1-WZ-10°** (east-west)



Structure - description:

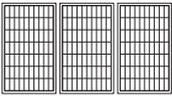
Complete support system for fixing two rows of panels in a vertical arrangement

Technical description:

Materials of the support system:
MC- constructional steel in grades S250GD and S350GD in Magnelis® coating, ZM430 for support posts, ZM310 for assembled parts above ground.
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
 Structure - tested for strength

Arrangement of the modules:

- vertical - **V**



Ground conditions:

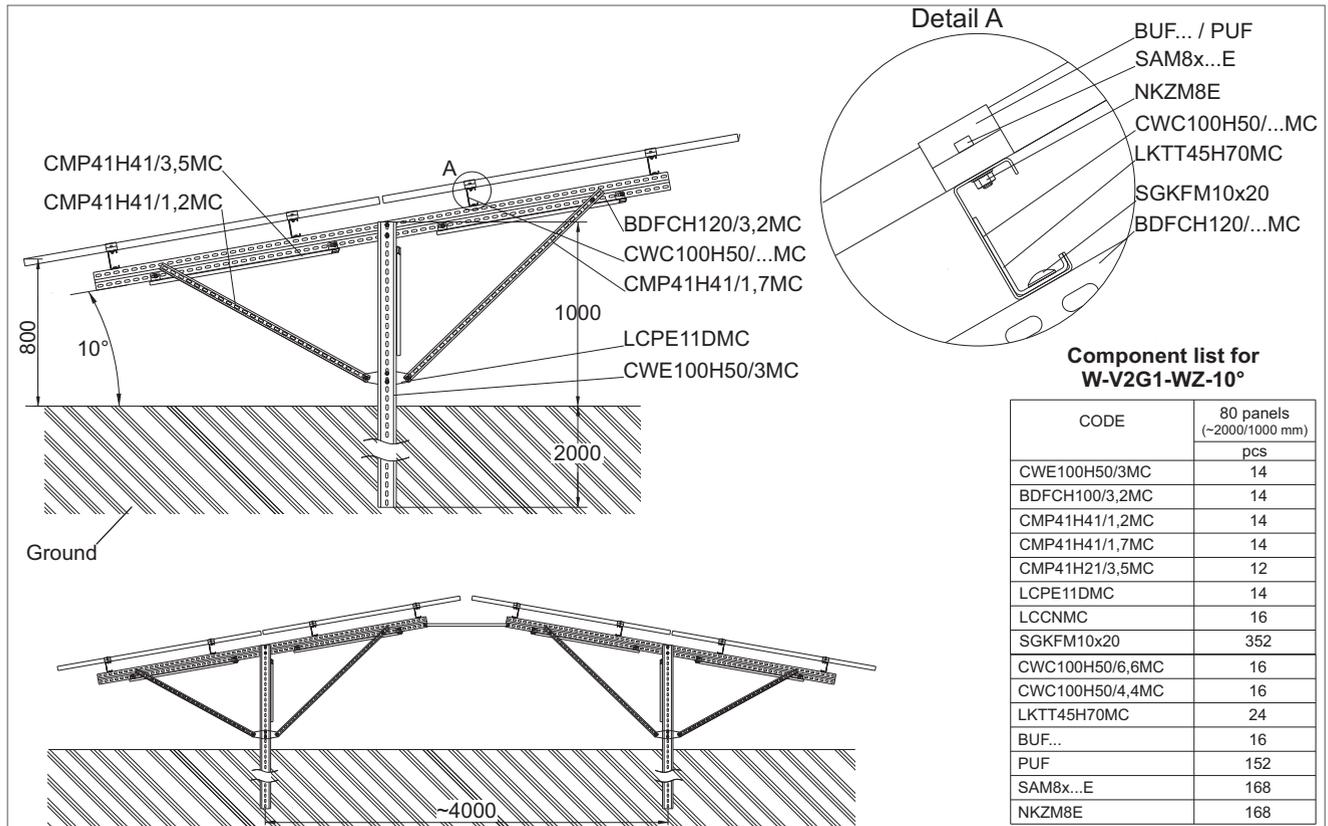
- soil with good/high load capacity

Construction assembly variants:

- W-V2G1-WZ structure - rammed into the ground (anchorage depth depends on ground conditions)
- W-V2K1-WZ structure - support posts anchored to the concrete foundation
- W-V2B1-WZ structure - support posts poured with concrete min. B20 in the holes in the ground (size of the foundation depends on the ground conditions)
- W-V2S1-WZ structure - on request, a screw screwed into the ground for fixing of the support posts

Warranty

BAKS provides a 10 year warranty period for the components included in the support structure - only if all conditions of the manufacturer's warranty are met. The warranty can be extended.



Component list for W-V2G1-WZ-10°

CODE	80 panels (~2000/1000 mm)	
	pcs	
CWC100H50/3MC	14	
BDFCH100/3,2MC	14	
CMP41H41/1,2MC	14	
CMP41H41/1,7MC	14	
CMP41H21/3,5MC	12	
LCPE11DMC	14	
LCCNMC	16	
SGKFM10x20	352	
CWC100H50/6,6MC	16	
CWC100H50/4,4MC	16	
LKTT45H70MC	24	
BUF...	16	
PUF	152	
SAM8x...E	168	
NKZM8E	168	

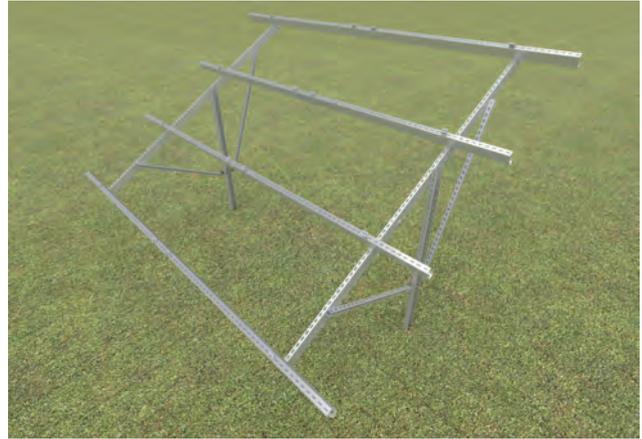
Detailed information on the products can be found on pages 47-75



Mounting structure - for the installation of photovoltaic panels

- freestanding

System: **W-H3G1-30°** (optionally 25°)



Structure - description:

Complete support system for fixing three rows of panels in a horizontal arrangement

Technical description:

Materials of the support system:

MC- constructional steel in grades S250GD and S350GD in Magnelis® coating, ZM430 for support posts, ZM310 for assembled parts above ground

A- Aluminium

E- Stainless steel

F- Steel in zinc flake coating

Structure - tested for strength

Ground conditions:

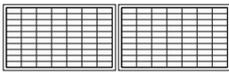
- soil with good/high load capacity

Construction assembly variants:

- W-H3G1 structure - rammed into the ground (anchorage depth depends on ground conditions)
- W-H3K1 structure - support posts anchored to the concrete foundation
- W-H3B1 structure - support posts poured with concrete min. B20 in the holes made in the ground (size of the foundation depends on the ground conditions)
- W-H3S1 structure - on request, a screw screwed into the ground for fixing of the support posts

Arrangement of the modules:

- horizontal - H



Warranty

BAKS provides a 10 year warranty period for the components included in the support structure - only if all conditions of the manufacturer's warranty are met. The warranty can be extended.

Detail A

- BUF... / PUF
- SAM8x...
- NKZM8E
- LKTT45H70MC
- CWC100H50/...MC
- SGKFM10x20
- BDFCH100/3,2MC

The figure shows an example of the arrangement of the concentration points of the structure -

Component list for W-H3G1-30°

CODE	45 panels (-1700/1000 mm) pcs
CWE100H50/3,6MC	8
BDFCH100/3,2MC	8
CMP41H41/1,2MC	8
CMP41H41/1,7MC	8
CMP41H41/3,5MC	8
LCPE11DMC	8
LCCNMC	8
CWC100H50/6,6MC	8
CWC100H50/4,4MC	12
LKTT45H70MC	16
BUF...	60
PUF	60
SAM8x...E	120
NKZM8E	120
SGKFM10x20	216

Detailed information on the products can be found on pages 47-75



Mounting structure - for the installation of photovoltaic panels

- freestanding

System: **W-H4G2-30°** (optionally 25°)



Structure - description:

Complete support system for fixing four rows of panels in a horizontal arrangement

Technical description:

Materials of the support system:

MC- constructional steel in grades S250GD and S350GD in Magnelis® coating, ZM430 for support posts, ZM310 for assembled parts above ground

A- Aluminium

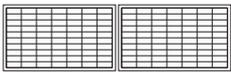
E- Stainless steel

F- Steel in zinc flake coating

Structure - tested for strength

Arrangement of the modules:

· horizontal - H



Ground conditions:

· soil with good/high load capacity

Construction assembly variants:

- W-H4G2 structure - rammed into the ground (anchorage depth depends on ground conditions)
- W-H4K2 structure - support posts anchored to the concrete foundation
- W-H4B2 structure - support posts poured with concrete min. B20 in the holes made in the ground (size of the foundation depends on the ground conditions)
- W-H4S2 structure - on request, a screw screwed into the ground for fixing of the support posts

Warranty

BAKS provides a 10 year warranty period for the components included in the support structure - only if all conditions of the manufacturer's warranty are met.

The warranty can be extended.

Detail A

The figure shows an example of the arrangement of the concentration points of the structure -

Component list for W-H4G2-30°

CODE	40 panels (~1700/1000 mm) pcs
CT70H50/3MC	6
CWT70H50/4,4MC	6
BDFCH120/4,4MC	6
CMP41H41/1,5MC	6
CMP41H41/3MC	2
CMP41H41/3,5MC	2
LCPT11MC	6
CWC100H50/6,6MC	10
CWC100H50/4,4MC	5
LKTT45H70MC	10
SGKFM10x20	140
BUF...	40
PUF	60
SAM8x...E	100
NKZM8E	100

Detailed information on the products can be found on pages 47-75



Mounting structure - for the installation of bifacial photovoltaic panels

- freestanding

System: **W-H4G2-BI-30°** (optionally 25°)



Structure - description:

Complete support system for fixing bifacial panels that use the sunlight reflected from the ground.

Technical description:

Materials of the support system:

MC- constructional steel in grades S250GD and S350GD in Magnelis® coating, ZM430 for support posts, ZM310 for assembled parts above ground.

A- Aluminium

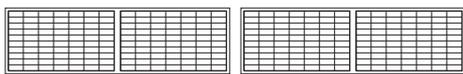
E- Stainless steel

F- Steel in zinc flake coating

Overview structure.

Arrangement of the modules:

· horizontal - H



Ground conditions:

· soil with good/high load capacity

Construction assembly variants:

- W-H4G2-BI structure - rammed into the ground (anchorage depth depending on ground conditions)
- W-H4K2-BI structure - support posts anchored to the concrete foundation
- W-H4B2-BI structure - support posts poured with concrete min. B20 in the holes made in the ground (size of the foundation depends on the ground conditions)
- W-H4S2-BI structure - on request, a screw screwed into the ground for fixing of the support posts

Warranty

BAKS provides a 10 year warranty period for the components included in the support structure - only if all conditions of the manufacturer's warranty are met.

The warranty can be extended.

By using supporting structure - only where the panel frames are and thanks to the reduction of concentrations below the level of the lower row of panels, it is possible to take full advantage of the efficiency of bifacial modules.



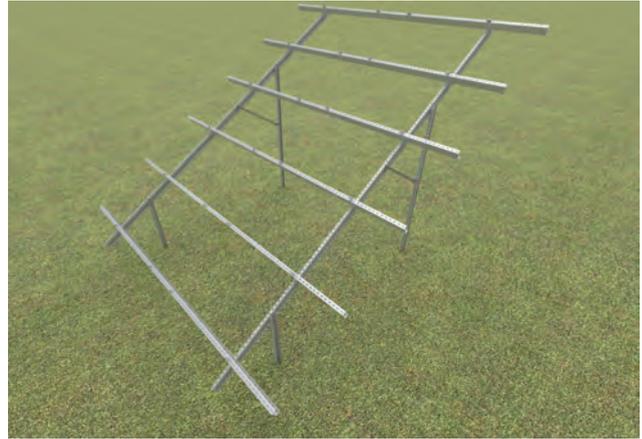
Detailed information on the products can be found on pages 47-75



Mounting structure - for the installation of photovoltaic panels

- freestanding

System: **W-H5G2-30°** (optionally 25°)



Structure - description:

Complete support system for fixing five rows of panels in a horizontal arrangement

Technical description:

Materials of the support system:

MC- constructional steel in grades S250GD and S350GD in Magnelis® coating, ZM430 for support posts, ZM310 for assembled parts above ground

A- Aluminium

E- Stainless steel

F- Steel in zinc flake coating

Structure - tested for strength

Ground conditions:

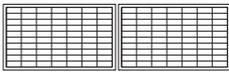
- soil with good/high load capacity

Construction assembly variants:

- W-H5G2 structure - rammed into the ground (anchorage depth depends on ground conditions)
- W-H5K2 structure - support posts anchored to the concrete foundation
- W-H5B2 structure - support posts poured with concrete min. B20 in the holes made in the ground (size of the foundation depends on the ground conditions)
- W-H5S2 structure - on request, a screw screwed into the ground for fixing of the support posts

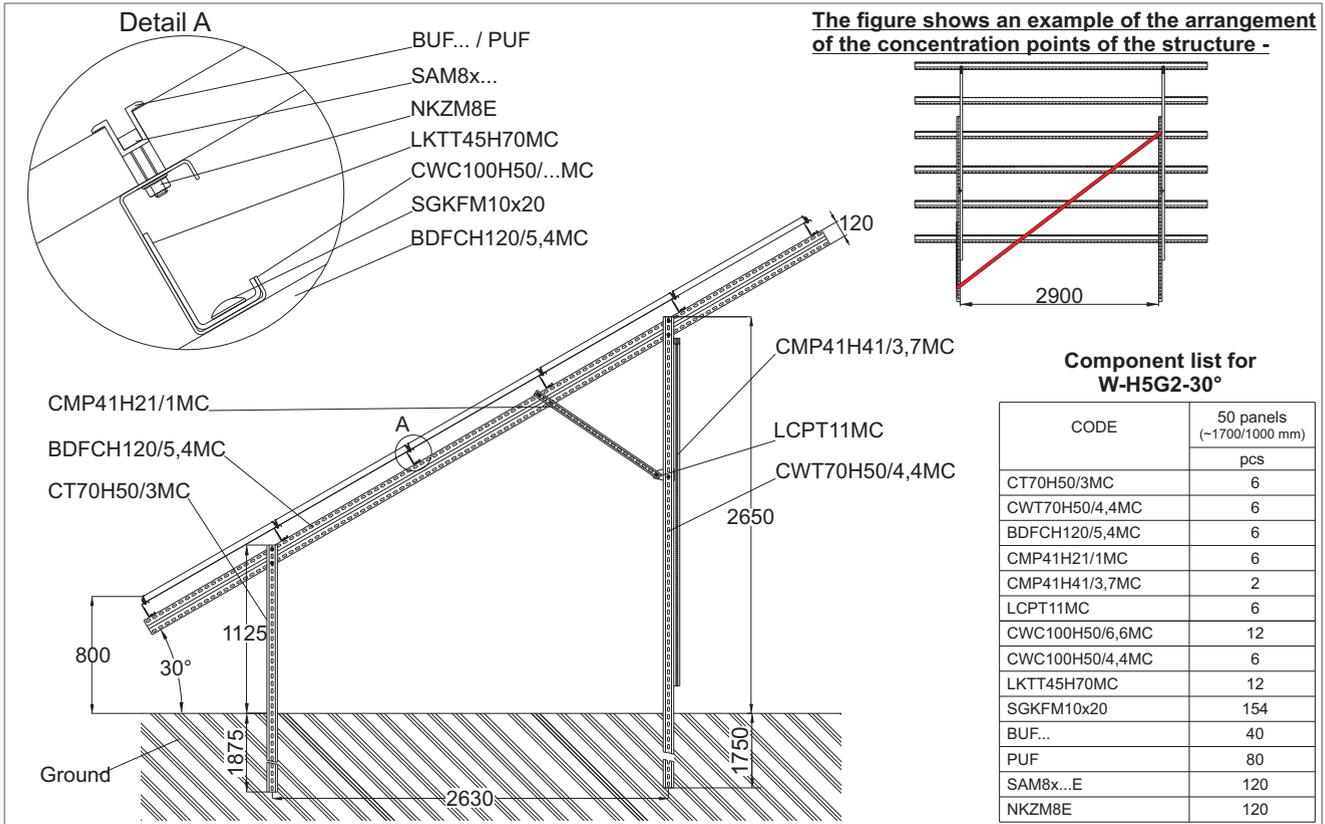
Arrangement of the modules:

- horizontal - H



Warranty

BAKS provides a 10 year warranty period for the components included in the support structure - only if all conditions of the manufacturer's warranty are met. The warranty can be extended.



Detailed information on the products can be found on pages 47-75



Mounting structure - for the installation of photovoltaic panels

- freestanding

System: **W-H6G2-30°** (optionally 25°)



Structure - description:

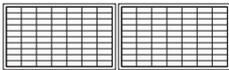
Complete support system for fixing six rows of panels in a horizontal arrangement

Technical description:

Materials of the support system:
MC- constructional steel in grades S250GD and S350GD in Magnelis® coating, ZM430 for support posts, ZM310 for assembled parts above ground.
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
 Structure - tested for strength

Arrangement of the modules:

· horizontal - H



Ground conditions:

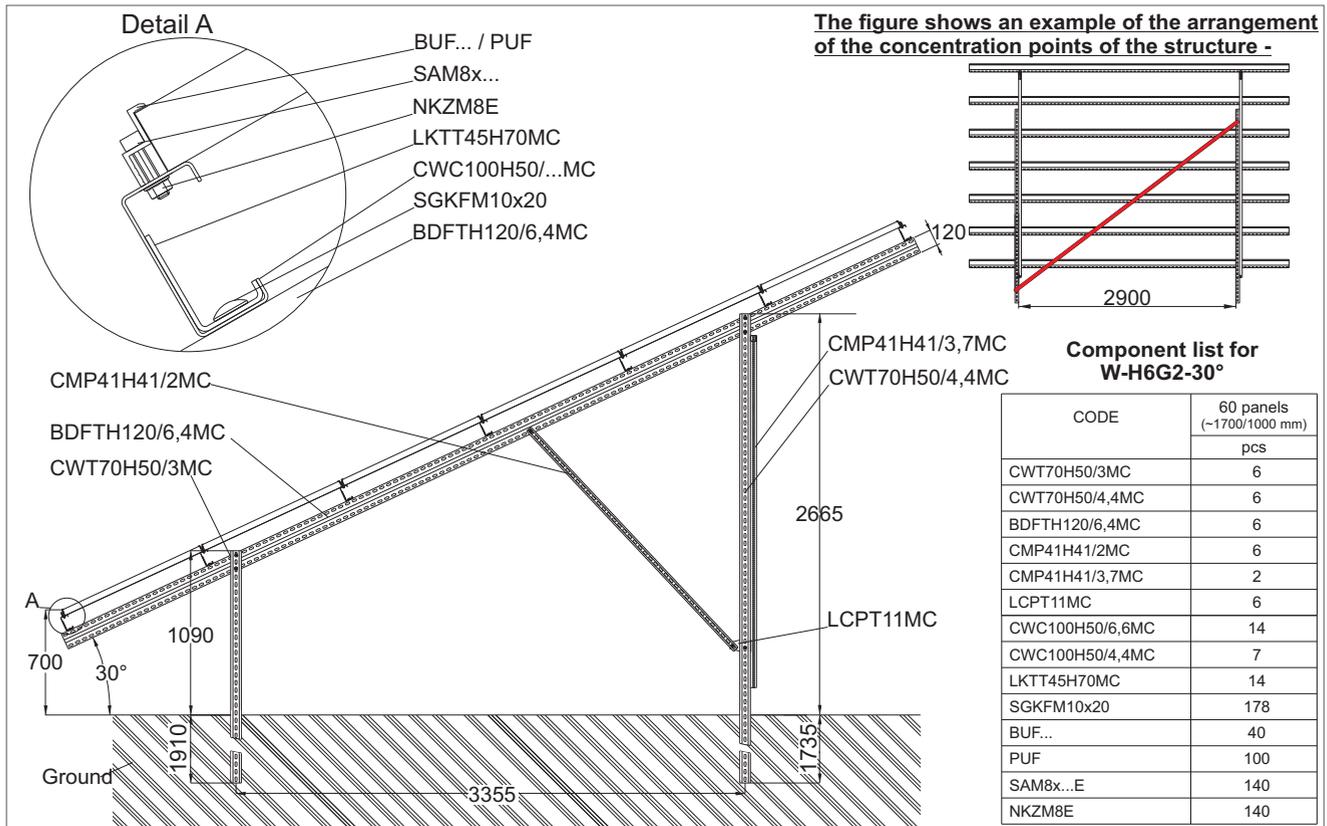
· soil with good/high load capacity

Construction assembly variants:

- W-H6G2 structure - rammed into the ground (anchorage depth depends on ground conditions)
- W-H6K2 structure - support posts anchored to the concrete foundation
- W-H6B2 structure - support posts poured with concrete min. B20 in the holes made in the ground (size of the foundation depends on the ground conditions)
- W-H6S2 structure - on request, a screw screwed into the ground for fixing of the support posts

Warranty

BAKS provides a 10 year warranty period for the components included in the support structure - only if all conditions of the manufacturer's warranty are met. The warranty can be extended.



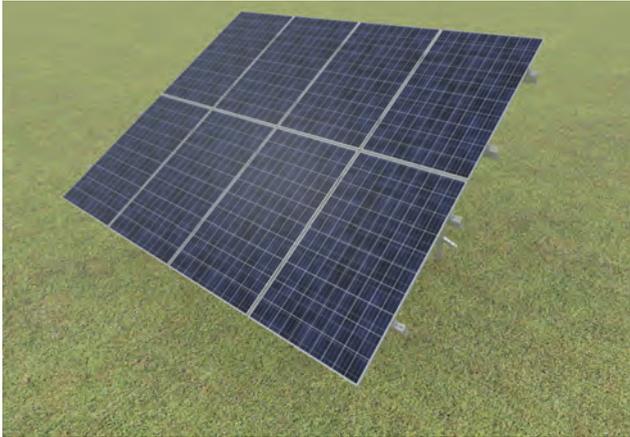
Detailed information on the products can be found on pages 47-75



Mounting structure - for the installation of photovoltaic panels

- freestanding

System: **W-V2G2-30°** (optionally 25°)



Structure - description:

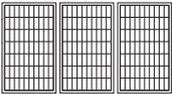
Complete support system for fixing two rows of panels in a vertical arrangement

Technical description:

Materials of the support system:
MC- constructional steel in grades S250GD and S350GD in Magnelis® coating, ZM430 for support posts, ZM310 for assembled parts above ground.
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
 Structure - tested for strength

Arrangement of the modules:

· vertical - V



Ground conditions:

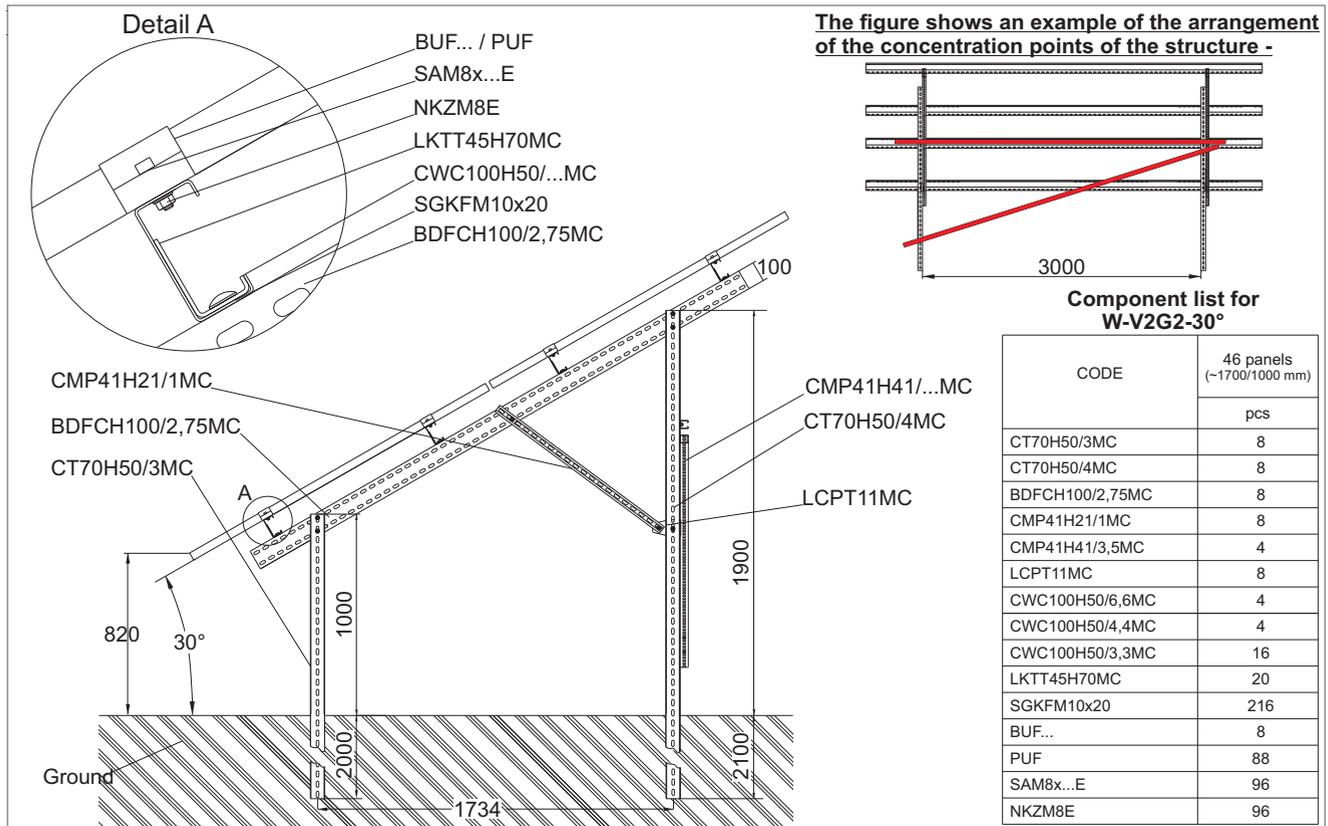
· soil with good/high load capacity

Construction assembly variants:

- W-V2G2 structure - rammed into the ground (anchorage depth depends on ground conditions)
- W-V2K2 structure - support posts anchored to the concrete foundation
- W-V2B2 structure - support posts poured with concrete min. B20 in the holes made in the ground (size of the foundation depends on the ground conditions)
- W-V2S2 structure - on request, a screw screwed into the ground for fixing of the support post

Warranty

BAKS provides a 10 year warranty period for the components included in the support structure - only if all conditions of the manufacturer's warranty are met. The warranty can be extended.



Detailed information on the products can be found on pages 47-75



Mounting structure - for the installation of photovoltaic panels

- freestanding

System: **W-V3G2-30°** (optionally 25°)



Structure - description:

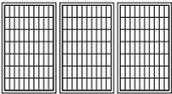
Complete support system for fixing three rows of panels in a vertical arrangement

Technical description:

Materials of the support system:
MC- constructional steel in grades S250GD and S350GD in Magnelis® coating, ZM430 for support posts, ZM310 for assembled parts above ground.
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
 Structure - tested for strength

Arrangement of the modules:

· vertical - V



Ground conditions:

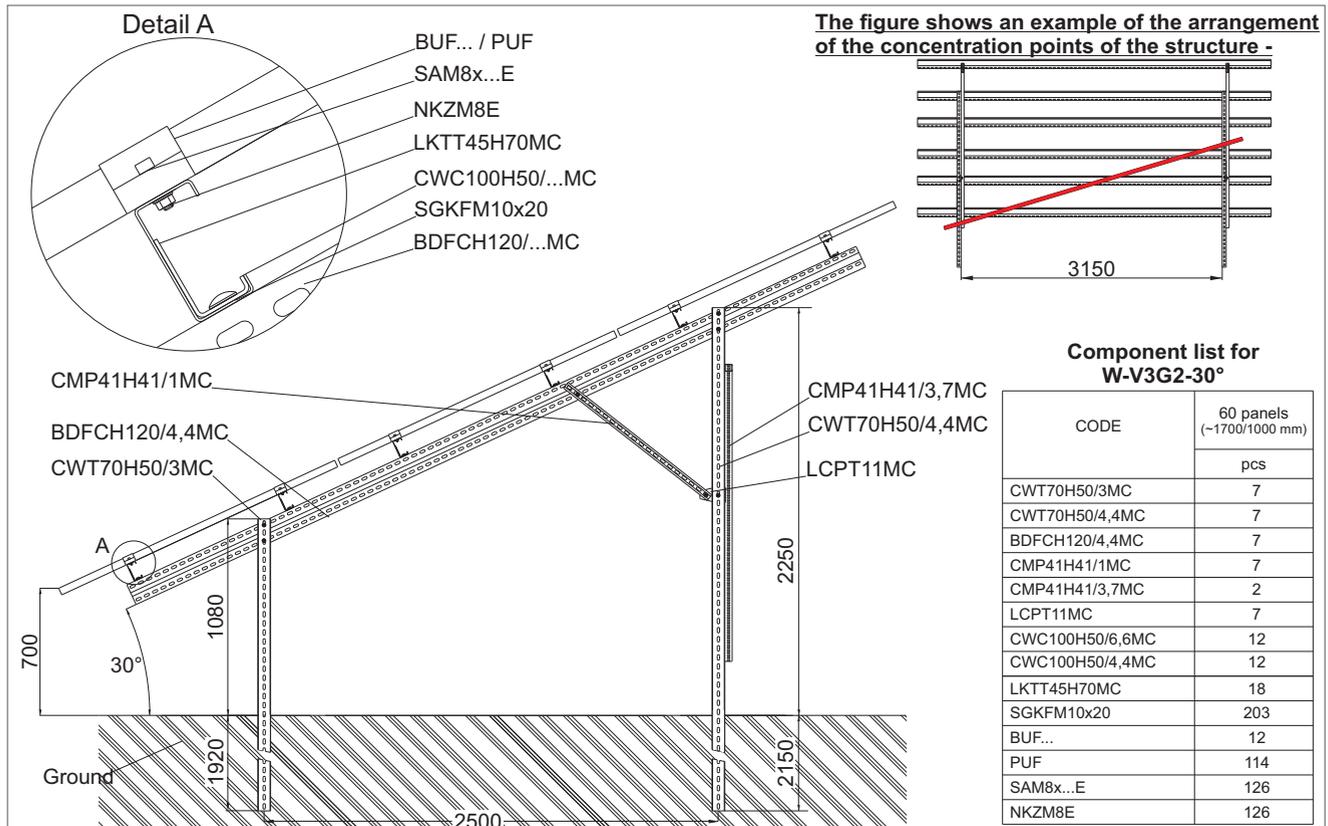
· soil with good/high load capacity

Construction assembly variants:

- W-V3G2 structure - rammed into the ground (anchorage depth depends on ground conditions)
- W-V3K2 structure - support posts anchored to the concrete foundation
- W-V3B2 structure - support posts poured with concrete min. B20 in the holes made in the ground (size of the foundation depends on the ground conditions)
- W-V3S2 structure - on request, a screw screwed into the ground for fixing of the support post

Warranty

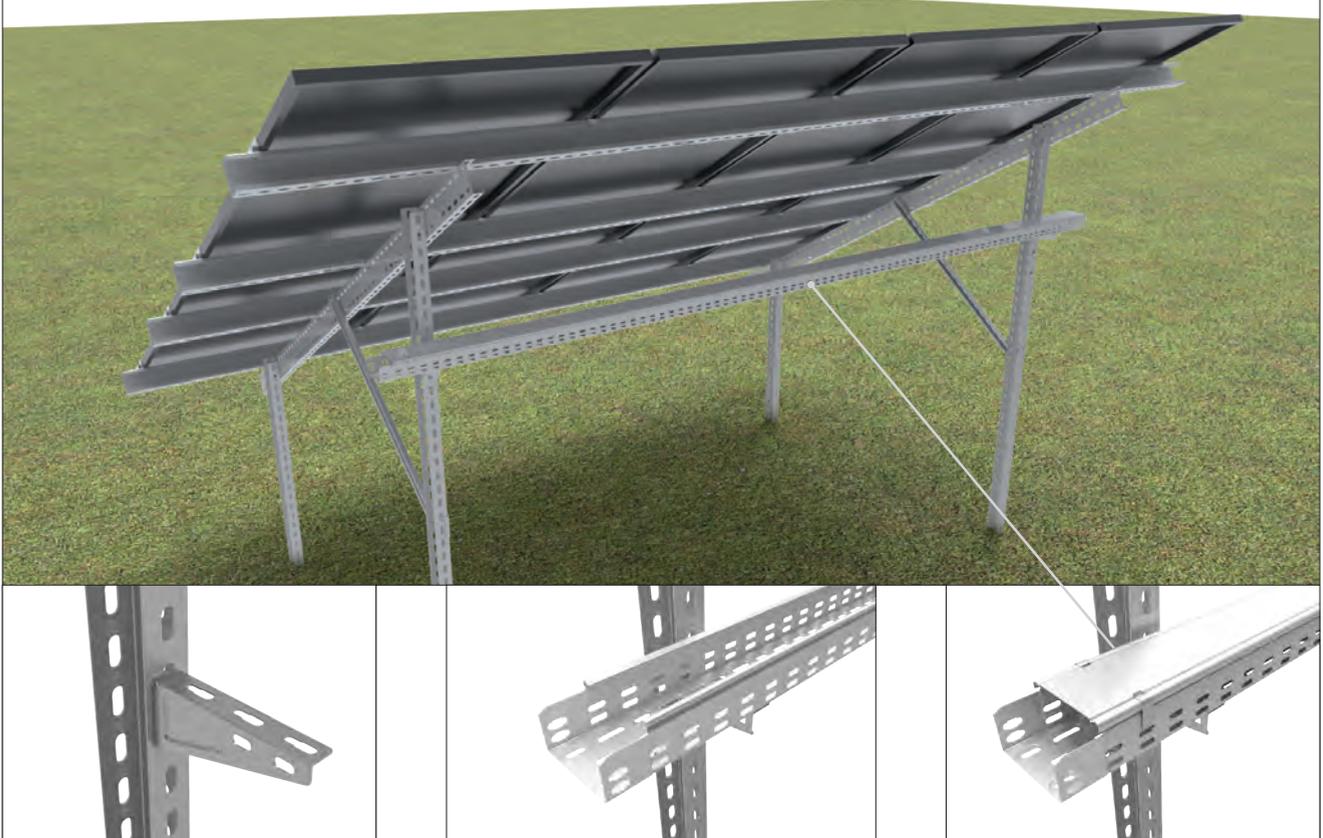
BAKS provides a 10 year warranty period for the components included in the support structure - only if all conditions of the manufacturer's warranty are met. The warranty can be extended.



Detailed information on the products can be found on pages 47-75

BAKS freestanding structures are adapted for mounting BAKS brackets and cable trays. The brackets are fixed to the support posts using lock screws, so they guarantee greater strength and are dedicated to structures with increased support spacing, and in case of installation in which high power inverters are used. BAKS cable trays provide excellent heat dissipation and are resistant to direct and diffuse UV radiation. They allow for quick installation of cables. They are equipped with covers which protect the cables from damage by forest animals and rodents. BAKS products have an ITB certificate confirming electrical continuity of the circuit, which guarantees no storage of electric charges in an earthed construction.

Electrical installation in a perforated KG... cable tray



Cable tray support - WW... bracket screwed to the channel (support posts)

Electrical installation in an unperforated KB... cable tray

