The Company

The BAKS company was established in 1986. We are now a leading manufacturer of support systems for power and telecommunications industry as well as pneumatic and water cables, and other sectors, active in Poland and throughout Europe.
Due to the increasing demand in the RES sector, BAKS company also offers a wide range of solutions for the installation of photovoltaic panels, both for free-standing structures and for flat and sloping roofs. Systems mounted directly to the building elevation and balcony railings are available as well. Using the latest technology, an experienced a team of specialists and investments in modern machines and equipment (punching machines, profiling lines, welding robots, specialist laser cutting machines, bending brakes, powder paint shop, hot dip galvanizing plant) allowed us to achieve the highest standards.

Our products quality is confirmed by following certificates and reports:
- Certificate for mounting systems for photovoltaic panels, certificate no.: TM61000362.001 issued by TÜV Rheinland
- The product certificate in accordance with PN-EN 61537:2007 issued by TÜV Rheinland, concerns product safety and the strength of the cable tray systems in the catalogue (the strength values given in the catalogue contain a safety factor of 70%, which means that they are 70% stronger than the strength values given in the catalogue). It also confirms the electrical continuity of the cable tray system. This standard is harmonised with the EU Low Voltage Directive up to 1 kV.
- National Technical Assessment of the ITB Institute for mounting systems for photovoltaic panels (under certification)
- Reports from strength calculations of available PV structures made by authorized construction offices
- VDE certificates confirming electrical continuity of BAKS systems
- TÜV ISO 9001:2015 certificate confirming that the quality of products designed and produced by BAKS comply with ISO 9001:2015
- Certificate confirming the implementation of the environmental management system - ISO 14001:2015
- TÜV certificate for Factory Production Control in compliance with EN 1090 in accordance with system 2+.

We are a recognized and valued partner in our field. Participation in various projects is a proof of that - please find some examples below in Poland:
- PV farms throughout Poland within one investment – 33x1MW
- PV farms throughout Poland within one investment – 31x1MW
- PV farm in Góra I,II,III,IV – 6MW
- PV farm in Duszniki – 6MW
- PV farm in Krotoszyn – 6MW
- PV farm in Nekla – 4MW
- PV farm in Kamiennej Górze – 3MW
- PV farm in Bierutowie – 2MW
- PV farm in Krośnie – 1MW
- PV farm in Skorowitach – 1MW
- PV farm in Jarostach (na potrzeby centrum logistycznego IKEA) – 0,8MW
- PV farm in Osiemborowie – 0,8MW
- PV farm in Kosutach – 0,8MW
- PV installations on flat and sloping roofs throughout Poland with a total power of 0,5GW
- PV installations for sloping roofs, including the supply of structures for projects carried out by IKEA
- Investments throughout Poland made through the electric wholesalers cooperating with us.

Abroad:
- PV farm in Halamjugra (Węgry) – 24MW
- PV farm in Pussi (Estonia) – 7,62MW
- PV farm in Vagari Yingli (Estonia) – 5,88MW
- PV farm in Rapla (Estonia) – 5,27MW
- PV farm in Nowoukrainice (Ukraina) – 5MW
- PV farm in Rabase (Estonia) – 4,51MW
- PV farm in Marjamma (Estonia) – 3,7MW
- PV farm in Vagari (Estonia) – 2,78MW
- PV farm in Pussi II (Estonia) – 1,24MW
- PV farm in Joeveere (Estonia) – 1,12MW
- PV farm in Janikese Hundi (Estonia) – 0,56MW

In order to meet the needs of our Customers, the production line has been modernized, which makes it possible to realize our Customers' individual projects according to the provided documentation. Caring for the Customers' needs by providing the highest quality products, maintaining low prices, as well as professional logistics have earned BAKS the trust of its Customers.
BAKS elements of PV structure systems are available in electrical wholesalers i.a. all over Poland. We invite you to purchase photovoltaic systems produced by us
.

Kazimierz Sielski

Technical Data Sheet - WARRANTY

I. General Terms and Conditions of the Warranty

1. BAKS („Producer") hereby warrants to the Buyer that the product is free of material and workmanship defects.
2. A defect in the material and workmanship shall be understood as a defect causing the product to operate in a manner which is inconsistent with the Producer's specification.
3. The warranty shall cover in particular: mechanical strength of the goods and corrosion resistance of the zinc coating, the coating of powder-coated components and components made from stainless metal sheets.
4. The warranty covers damage and defects caused by reasons solely attributable to the Producer, such as breaking and bending of the structure, flaking of the protective coating.
5. The Buyer shall be understood as the entity which made a purchase directly from the Producer.
6. The Producer shall remove, free of charge, any defects in the material and workmanship discovered during the warranty period on the terms and conditions stipulated herein, by fixing the product or replacing it with a product which is free of any defect. The Producer has discretion with regard to the choice of the method of repair.
7. The warranty period is 10 years from the date of sale for the corrosiveness class C1, C2 or C3, provided that the user of the PV installation carries out maintenance of photovoltaic components at least once a year. *
8. In justified cases, the period of warranty may be extended by the Buyer's request following the arrangement of the conditions of storage, use and maintenance of the Products with the Producer. Any extension of the warranty period shall be certified in writing, otherwise it shall be null and void.
9. This warranty shall be effective on condition that the product is used for purposes it was designed for, in line with the Producer's specifications, technical and environmental conditions.
10. Neither the Buyer nor any third parties shall have any claims for damages due to any defects arising from a failure of the Product. The only liability of the Producer under this warranty shall be the repair or replacement of the Product for one which is free of any defect, in accordance with the terms and conditions hereof.
11. The Producer shall be liable to the Buyer only for physical defects arising from causes existing in the purchased Product itself.
12. In order for the warranty to be valid and effective, the following conditions must be satisfied:

Transport

Products shall be transported in dry, covered means of transport in such a way that the Products are protected against moving, mechanical damage and exposure to elements. Units of load shall be placed in the means of transport one next to another tightly and fixed to prevent them from moving. The cargo should be fixed with transport belts to prevent damage to the components.

Storage of products

Products should be stored in dry, clean, ventilated storage rooms free from any chemically reactive vapours and gases. Products must be secured from getting wet or damp. If zinc-coated elements get wet or damp, remove them from wet packaging as soon as possible, disassemble them and allow them to dry, then re-assemble them and store in a dry and airy room that ensures protection from precipitation. Products must be stored on pallets, in containers or on specially designed bases (they should not be put directly on concrete, floor ot ground).

Storage in inappropriate (humid) conditions may lead to condensation appearing between the surface of zinc coated or painted elements, or ones made from stainless steel. If zinc-coated elements are exposed to humidity, so called white corrosion (white-greyish stains) may appear, which does not affect the quality of the zinc coat and does not provide grounds for claiming the warranty. Products made from stainless steel or painted products may be protected with film, which must be removed without delay upon delivery. Leaving the protective film on products that are painted or made from stainless steel during storage in high temperature and high exposure to sunlight, may lead to chemical reactions causing the film to be embedded in the packaged elements. As a result of such reaction, it will be impossible to remove the film without damaging the surface of the products. For the duration of storage and assembly of the elements, they must be protected against contact with lime, cement and other alkaline construction materials. The products shall be protected from splashes from grinding and welding, repair or construction works as they may leave slight discolourations which may be difficult to remove. The transport, storage and assembly of the products must be performed in an environment consistent with the appropriate corrosiveness class based on the PN EN ISO 12944:2001 standard (more information in the table).

In case of not conforming to the regulations, claims shall not be accepted!
The products must be stocked indoors, under roof and in a dry environment. Do not allow humidity nor wetting the products!

Protection and maintenance of Magnelis coated components according to EN 10346:2015-09

The most common cause of defects in zinc coatings is improper handling of the product during storage and installation:

- products in storage (i.e. in original BAKS packaging) should be stored in dry and ventilated rooms;
- during storage, protect against changes in humidity and temperature which may cause condensation;
- if it is necessary to keep the products in the open air for a short period of time, ensure moisture removal. Use a cover ensuring breathability;
- in case of wetting of galvanised elements, the phenomenon of so-called white corrosion may occur, which does not reduce the protective layer and does not impair the anticorrosive properties of the coating, but does impair the appearance and aesthetics of the components. However, over time, if the components have not been dried, there is a complete reduction of the zinc coating to the point of corrosion. If wetting of galvanised components and white corrosion occurs, proceed as follows procedure:
  ✓ remove outer packaging immediately,
  ✓ arrange them so that the individual elements do not come into direct contact with each other (e.g. by interlaying the layers with narrow galvanised steel, plastic or aluminium profiles),
  ✓ wash with running water if there are any solid contaminants (soil, wet cardboard packaging etc.),
  ✓ dry to prevent moisture build-up or leave in an open, dry, ventilated area to dry,
  ✓ store in a dry room.
- Rough edges that have been created whilst cutting and drilling for the installation, should be carefully deburred and degreased, and contaminants (dust, oil, grease, traces of corrosion) removed. Repairs should be carried out by painting with zinc-rich primer, zinc paste or a technically equivalent material. The thickness of the paint coat should be at least 30 μm thicker than the required local thickness of the zinc coating.

Protection and maintenance of painted elements

The most frequent cause of defects in paint coatings include: mechanical defects (scratches, chips) and cleaning with chemical agents. Therefore the following rules must be observed:

- pay particular attention during as assembly to avoid scratching and chipping
- use protective tapes (e.g. painter's tapes) when cutting the element to size
- clean the product at least twice a year
- clean with delicate, non-abrasive fabrics and clean water with pre-tested detergent
- do not clean the coating with steam jets
- if you intend to clean the product with other cleaning agents than water, test the effects of the agent before cleaning the surface. If you notice any undesirable effects, do not use the tested cleaning agent.
- do not use any highly-acidic or highly alkaline cleaning agents (including ones containing detergents)
- do not use salt or chemical substances meant for removing ice in the vicinity of painted surfaces.

Protection and maintenance of Magnelis coated components according to EN 10346:2015-09

- Storage, assembly and operation of the structure will take place in an environment with the corrosive aggressiveness category specified in the table below for the given warranty period and the given zinc coating agreed in advance with the manufacturer,
- During the storage period, prior to assembly, structural components shall be stored on bases in such a manner as to prevent contact with the substrate, accumulation of precipitation and any other incidental deposits. Pre-packed construction elements must not be exposed to moisture. In the event of dampness the package, the elements must be unpacked and spread out until they are fully dry,
- Elements damaged during assembly must be replaced with new, defect-free elements at the purchaser's expense,
- The purchaser shall, upon completion of the assembly of the structure, at his own expense, carefully inspect the protective coating and carry out a complete preservation by cleaning galvanised surfaces with neutral chemical agents to remove any remaining impurities (chemical residues, grease, oily substances and other impurities which may cause damage to the anti-coatings). Which may cause damage to the anti-corrosion coatings). After cleaning the structure, the purchaser is obliged to document with a photographic image any corrosion spots that may have occurred and to send the documentation to the manufacturer in order to establish the damage caused to the product. The purchaser is obliged to send the report to the manufacturer within 6 months of the purchase and immediately after completion of the installation under risk of loss of guarantee. Products made of Magnelis-coated material may, in the initial phase of use, at the edges of the material or at the edges of the openings, become covered with a thin, superficial layer of red corrosion. In the course of time, the coating will self-regenerate, i.e. oxides of alloying substances will form on the surface. Over time, a self-regenerating effect occurs, i.e. the formation of oxides of the Magnelis alloying agent, which form a tight protective and corrosion-repellent layer between the steel and the atmosphere. Detailed information on the Magnelis coating is available on request.

Protection and maintenance of stainless steel and aluminium components

The treatment method and the correct choice of material grade for the prevailing atmospheric conditions is an extremely important factor that affects the quality of the surface during the servicing process. The corrosion resistance of stainless steel can be maintained by cyclic surface cleaning and further improved by chemical surface treatment - passivation. The most common cause of the appearance of „corrosion" spots is:

- contamination of the surface by particles of iron, black steel (splintering during grinding cutting, grinding, welding)
- scratches that occur at the point of friction with a sharp component made of mild steel,
- improper storage and transport
- inappropriate choice of material grade or product protective coating for the atmospheric environment in which it is used

Storage of galvanised, galvanised and lacquered products - made of stainless/acid-resistant steel, aluminium

Superficial dark discolourations occurring locally on products made of stainless/acid-resistant steel or aluminium do not affect the quality and functionality of the product and are therefore not subject to complaint. During the mechanical processing of stainless/acid-resistant steel or aluminium, interference with the passive layer of the component occurs causing minor damage to the tension surface of the passive layer. Upon contact with oxygen, discolouring substances precipitate in the places of minor surface defects, causing discolouration. This process does not occur deep into the material. Further structure remains intact. Such phenomena can occur under any conditions both during transport, storage and use (especially in humid conditions the precipitation of discolouring substances on the surface of the material is accelerated). Damage to the passive coating most frequently occurs during product assembly (e.g. by impacts, abrasions, scratches) or as a result of the use of improper tools and abrasives. Under assembly conditions, strongly adhering deposits and tarnishes can form on the products, which contribute to the formation of stains, discolouration or tarnishing. These are harmless to the product and are usually cleanable. Stainless steel is characterised by the fact that it does not require additional corrosion protection after treatment. Nevertheless, maintenance and cleaning are required during the service life of the material in order to maintain the aesthetic appearance for a longer period of time. The frequency of cleaning and maintenance of the range depends on the conditions of use, and the degree of use. In the event of soiling on the products the coating must be cleaned and protected.

Cleaning and maintenance methods for stainless/acid-resistant steel and aluminium

The method of treatment and the correct choice of material grade for the prevailing atmospheric conditions is an extremely important factor that affects the quality of the surface during the service process.

- superficial discolouration and dust occurring during use can be removed with e.g. a cloth, suede leather or sponge;
- steel pads or wire brushes must not be used to scrub the products. They may leave fine particles of mild steel deposited on the surface of stainless steel or aluminium, resulting in discolouration or even corrosion of the material with deeper interference;
- localised discolouration from fingerprints, dust or rain can be easily and quickly removed by wiping the product;
- local dirt or grease marks, if they are minor, can be removed with water and a suitable detergent; for heavy dirt, use a
- special chemicals for cleaning and maintenance of stainless/acid-resistant steel or aluminium; alcohol-based cleaning agents are acceptable for cleaning (they do not affect the anticorrosive coating);
- in the event of iron particles on the elements as a result of construction work (e.g. grinding, welding, scratching with a sharp particles from construction work (e.g. grinding splatter, welding, scratching with a sharp mild steel component), they must be removed immediately. These particles will be susceptible to corrosion, which will have a destructive effect on the passive layer of the stainless steel component and may lead to corrosion of the material. Deposits with iron particles should be removed mechanically or with dedicated chemical agents;
- special care must be taken during installation (stainless steel products should preferably be installed in the last stage of the work). In the case of deeper damages and the appearance of so-called corrosion pits, it is necessary to etch the area with acid and protect it with a passivating agent. Please note that the etching process may cause irreversible loss of the aesthetic appearance of the assortment;
- after cleaning, it is recommended to carry out an additional polishing process with a dry soft cloth;
- cleaning agents containing chlorides should not be used and the use of silver cleaners is forbidden.

The frequency of cleaning and maintenance work depends on the environment in which it is used, the degree of soiling and the operating conditions. It is usually recommended to clean stainless steel products once every 12 months for light soiling or every 6 months for heavy soiling.

Treatment and maintenance steps in the event of signs of corrosion:

- **Mechanical cleaning**. Clean areas with surface corrosion with abrasive fleece and wipe with a dry, clean cloth;
- **Chemical cleaning**. Apply, e.g. with a brush, a thin and even layer of a suitable chemical agent to the cleaned surfaces. After approx. 5 min. (the time depends on the type of chemical used) wash off the chemical with a damp cloth. Rinse the cloth regularly in clean water or change to a clean one. Particular care should be taken to ensure that no other components in the vicinity of the parts to be cleaned are splashed. Then the damp surface should then be wiped dry with, for example, a soft cloth towel or paper.
- **Passivation.** The cleaned dry surfaces should be treated with a passivation agent using a sponge or spray, so that a thin even protective layer is formed. The above steps should be carried out manually without using power tools. If there are other components under the products to be cleaned and there is a risk of splashing they should be covered, e.g. with thick painter's foil. To clean stainless steel, do not use grout remover products or substances which contain hydrochloric acid, bleach or silver cleaners

Do not use carbon steel wire brushes, steel cleaning wool, steel scouring pads.

II. Loss of Warranty

1. The warranty does not cover:
   - mechanical damage and resulting defects, in particular damage to protective coatings caused during transport, storage, assembly, operation and maintenance;
   - damage resulting from installation and/or operation of the products under conditions or in a manner inconsistent with the manufacturer's specificatio (exceeding the permissible loads, damage caused by environmental conditions, etc.);
   - damage to products due to improper storage (mechanical damage, discolouration, stains, white corrosion);
   - damage caused by the use of salt and chemicals for de-icing in the vicinity of stored or installed products;
   - damage resulting from structural changes or the use of products contrary to their intended use;
   - damage resulting from the installation of products to concrete surfaces before the end of the concrete setting period, i.e. when 100% of the concrete strength has been reached and the cessation of emission of chemical secretions (installation on so-called fresh concrete);
   - damage occurring during transport using means of transport external to the Manufacturer;
   - failure to comply with the obligation to carry out periodic maintenance inspections, if required;
   - other damage resulting from improper use of the products;
   - damage resulting from adverse events (fire, inundation, damage resulting from acts of terrorism and war, etc.);
   - occurrence of payment arrears for the Product exceeding 90 days from the due date of the invoice.
2. The warranty does not cover normal operational maintenance activities, such as cleaning and maintenance.
3. Products installed at the destination must be subjected to periodic maintenance at intervals not exceeding 12 months consisting of removal of soiling (chemical residues, grease and oil residues and all other soiling which could damage the anticorrosion coating) and restoration of the coating. After maintenance, a report with full photo documentation showing the condition of the installation before and after the work is carried out must be sent to the manufacturer and after the works have been completed within 30 days of the completion of the maintenance under risk of voiding the guarantee. The report should indicate the products covered by the guarantee, the purchaser's details, proof of purchase no. the place where the products were installed. The report should be sent to: baks@baks.com.pl. Areas omitted from the report where corrosion appears cannot be the subject of a warranty claim.
4. The cable route MUST NOT be used as a communication/transportation route.

III. Exercising of Warranty

1. Defects discovered during the warranty period will be fixed free of charge by BAKS as soon as possible, after the relevant warranty claim is filed.
2. Defects or damage to the product uncovered during the warranty period should be reported to the Producer without delay, in any case not later than 7 days after their discovery.
3. The warranty procedure covers only complete, verifiable products, free of any mechanical defect or damage caused by external factors.
4. The following conditions must be satisfied in order for a claim under the warranty to be handled:
   ✓ the product's name, catalogue number, purchase date, the number of the packing list document or the purchase invoice,
   ✓ details of the damage to the products and the surroundings in which it occurred, with further information about the occurrence of defects in the product, including pictures of the defective products and the surroundings in which they are mounted and stored
5. Having acknowledged the claim, the Producer shall decide how the claim is to be satisfied.
6. The Producer reserves a right to conduct an on-site inspection in the place where the faulty product was mounted.
7. The Producer reserves a right to put the warranty procedure on hold if the Buyer is in arrears with the payment for invoices for longer than 14 days.

I. Information about the materials and protective coatings of materials of which BAKS products are made.

Table of corrosivity classes according to PN-EN ISO 12944-2:2018-02

Corrosivity classes	C1 very low	C2 low	C3 medium	C4 high	C5 very high (industry grade)	CX extreme (marine)
Reduction in protective coating [μm/year]	**< 0,1**	**> 0,1 to 0,7**	**> 0,7 to 2,1**	**> 2,1 to 4,2**	**> 4,2 to 8,4**	**> 8,4 to 25**
Examples of typical environments for moderate climate (for reference only) ---------- [**W**] - Indoors [**Z**] - Outdoors	**Indoors**: heated buildings with clean atmosphere, e.g. shops, offices, schools, hotels **Outdoors**: –	**Indoors**: non-heated buildings in which condensation may occur, e.g. sports halls, warehouses **Outdoors**: atmospheres with a low degree of pollution - mainly rural areas	**Indoors:** manufacturing premises with a high level of humidity and some air pollution, e.g. food processing plants, laundries, breweries, dairies **Outdoors**: urban and industrial atmospheres, moderate sulfur dioxide pollution; coastal areas with low salinity	**Indoors**: chemical plants, swimming pools, ship repair yard **Outdoors**: industrial zones and littoral areas of medium salinity	**Indoors**: buildings or areas with almost constant condensation and high pollution **Outdoors**: industrial areas with high humidity and an aggressive atmosphere as well as littoral areas with high salinity	**Indoors**: industrial areas with extreme humidity and aggressive atmosphere **Outdoors**: coastal areas with high salinity and industrial areas with extreme humidity and aggressive atmosphere and subtropical and tropical atmosphere

Material table

Material	Type of coating	Coating properties
Steel	[**S**] hot dip galvanizing Sendzimir met. PN-EN 10346:2015-09	Steel sheets up to a thickness of 3 mm that are still in the hot state, are coated with a layer of zinc in the mill by immersion. An even and tightly adherent zinc layer with an average thickness of approx. 19 μm is created. Damage to the layer through cutting, perforation or bending does not lead to progressive rusting. All Sendzimir zinc-coated trays, ladders and most carrier elements (not welded) are intended for use in dry areas where no chemically aggressive substances are present (e.g. fumes of: chlorine, acids, alkalis). We recommend indoor use in corrosivity categories C1 and C2.
	[**MC**] MAGNELIS PN-EN 10346:2015-09	The innovative MAGNELIS coating is a composition of pure zinc with magnesium and aluminium. Such composition provides excellent corrosion resistance even in harsh environmental conditions (up to 10 times higher than steel galvanized acc. to Sendzimir method). Such coating is less suspectible to white corrosion in comparison to pure zinc. The Magnelis coating naturally has dark grey colour and smooth unspangled aspect. Magnelis has the ability to regenerate itself at the cutting edges - in addition to the standard cathodic protection comparable to that of a zinc coating, Magnelis protects the exposed cutting edges from corrosion with a thin zinc coating with magnesium. Depending on the environment in which Magnelis is used, its use allows a significant, 2-4-fold reduction in coating weight compared to hot-dip galvanizing, additionally providing better anticorrosive properties and cost effectiveness.
	[**F**] Hot-dip galvanized PN-EN ISO 1461:2011	Completely processed parts (after cutting, bending, welding, etc.) are dipped in molten zinc at a temperature of approx. 450-460 °C. The process protects steel from corrosion. The process involves a complicated technology based on diffusion. The process involves zinc atoms penetrating into the outer steel surface to create a new iron-zinc alloy on the surface. Once the element is out of zinc bath, a coating of pure zinc is obtained on its surface. Depending on conditions during zinc coating (dipping time, cooling, quality of basic material surface, chemical composition of the basic material, etc.), the surface of the zinc coating can range from glossy light grey to matt dark grey; however, this does not affect quality of the protective coating. There may be the effect of humidity resulting in white stains on the surface. This is zinc hydroxide, also known as white corrosion, which does not affect the quality of the protective film, but it has an effect on aesthetic quality of the product. All types of cable trays and cable ladders as well as load bearing elements, which are zinc-coated by hot-dipping, are recommended for outdoor use, where vapours of chemically aggressive substances are present. Products undergoing hot-dip galvanizing process are mostly used in environments of category C3 and C4, where high humidity is present (basements, garage rooms, boiler rooms, etc.), and corrosion categories C5 and CX, where vapours of chemically aggressive substances occur, e.g. sea water, fumes from coal burning, etc. (shipyards, chemical / oil / gas processing plants, mines)..
	[**F**] Zinc flake coating PN-EN ISO 10683:2014-09	The base coating is applied in the form of zinc and aluminium flakes. The flakes react with the steel surface to form a well-adhering, conductive and non-toxic zinc-aluminium coating after heat holding. This method is characterised by very high corrosion resistance – up to 1,000 hours in a salt chamber acc. to ISO 9227, till occurrence of red corrosion. The method is accepted worldwide by leading manufacturers in the automotive industry, power sector and aviation; it is commonly applied for threaded items due to problem-free screwing elements together.
	[**G**] electrolytic zinc plating PN-EN ISO 2081:2011	Wire mesh cable trays along with fittings, bolts, nuts, washers are coated in electrolytic baths with a thin and even layer of zinc. The thickness of the coating is approx. 5 - 20 μm.It is bright and shiny..

Type of environment	Very low corrosion risk	Low corrosion risk	Medium corrosion risk	High corrosion risk	Very high corrosion risk
Corrosivity classes	C1	C2	C3	C4	C5, CX
Possible warranty extension	up to 5 years	up to 5 years	up to 5 years	up to 5 years	up to 2 years

Table presenting the relationship between zinc coating thickness and product thickness

Elements and their thickness	Local thickness of coating (minimum value, μm)	Average thickness of coating (minimum value, μm)
Steel > 6 mm	70	85
Steel > 3 mm to < 6 mm	55	70
Steel > 1,5 mm to < 3 mm	45	55
Steel < 1,5 mm	35	45

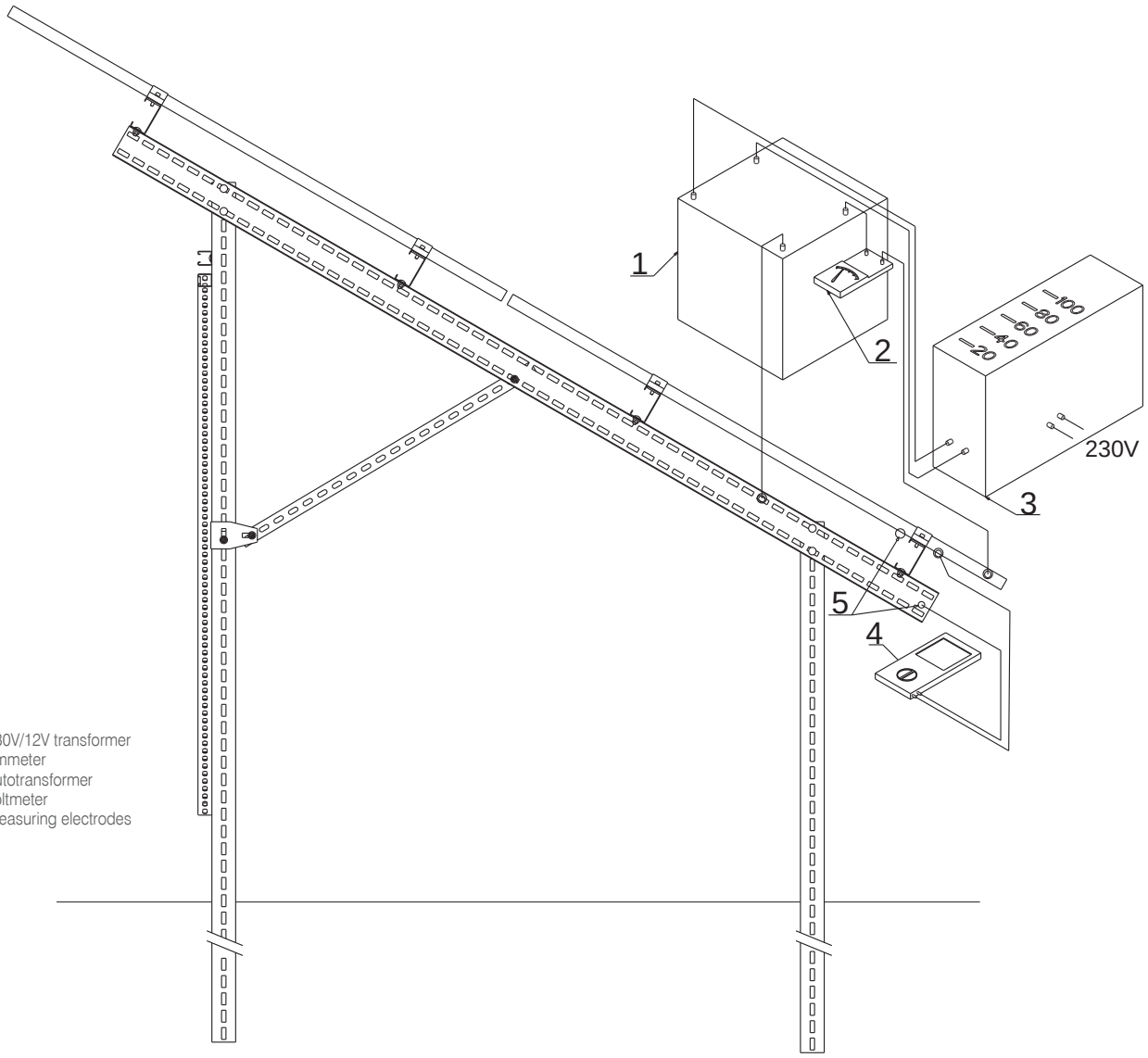
Material	Type of coating	Coating properties
Stainless steel	[**E**] 1.4301 (304) 1.4016 (430) 1.4401 (316)	For corrosion protection, acid resistant steels prove to be very good materials, e.g. 1.4301 (US Code 304). In a very aggressive environment, acid resistant steels are used as they contain more chemical elements such as nickel, chromium and molybdenum – 1.4401 (US Code 316). Systems made of acid resistant steels very often outclass alternative structures made of plastics. Elements of acid resistant steel are mostly used in highly chemically aggressive environments (refineries, treatment plants, plastic processing plants). Poorly envisaged savings can in time lead to interrupted operation of the PV installation due to the need to replace the load-bearing structure of the installation. Application of individual grades: 1.4301 (304) – main applications include the food industry, gas tanks, equipment in nuclear power plants, structures operated at low temperatures. 1.4016 (430) - mainly used like the grade described above (steel not suitable for welding) 1.4401 (316) – main applications include sewage treatment plants, sea environments, refining industry.
Aluminium alloys	[**A**] Stopy wg. PN-EN 573-3:2014-02	Aluminium in EN AW-6063 and EN AW-6005A grades is characterized by high strength and good corrosion resistance. It is suitable for anodising, which increases the corrosion resistance even more.
Steel + Stainless steel + Aluminium	[**L**] Powder coating	Polyester and epoxy powder coating (for internal coating). Coating thickness ranges from 80 μm to 120 μm; no primer or solvent is used. Powder coating on elements made of steel sheets, which are galvanized acc. to the Sendzimir method, provide smooth surfaces, which are free of cracks, runs and creases. Powder coating on elements made of hot-dip galvanized steel sheets does not provide perfectly smooth surfaces because hot-dip galvanized elements feature increased surface roughness, compared with the elements galvanized acc. to the Sendzimir method. Prior to painting, hot-dip galvanized elements undergo shotblasting to increase possibly adhesion of the paint to walls of the zinc-coated elements and remove zinc oxide, whose presence on the element prior to painting could result in coating spalling. Powder coating is characterised by high corrosion and chemical resistance, very good mechanical properties as well as water resistance. This solution is applied when improvement of corrosion resistance (by powder coating on galvanized sheets) is required. Coating durability depends on compliance with rules relating to transport, storage, installation method, chemical environment, where the structure is to be installed, and maintenance. The standard offer includes 14 colours (please see the pallet below). It is possible to order non-standard colour painting; however, this results in a higher price and longer time for completion of the purchase order. The paint is applied directly on the metal.

RAL 1015	RAL1023	RAL 2004	RAL 5012	RAL 5015	RAL 7016	RAL 7024	RAL7032	RAL7035	RAL9002	RAL9003	RAL9005	RAL9006	RAL9010
light ivory	traffic yellow	pure orange	light blue	sky blue	anthracite grey	graphite grey	pebble grey	light grey	grey white	signal white	jet black	white aluminium	pure white

Electrical continuity

BAKS PV structures meet the requirements of electrical continuity, which through proper installation and earthing ensure safety in the operation of the PV system including cabling.

Measuring systems for testing electrical circuit continuity



1. 230V/12V transformer
2. ammeter
3. autotransformer
4. voltmeter
5. measuring electrodes

CERTIFICATE

no: TM 61000362.002

Licence holder
BAKS Kazimierz Sielski
st. Jagodne 5
05-480 Karczew, PL

Manufacturing plant
BAKS Kazimierz Sielski
st. Jagodne 5
05-480 Karczew, PL

Project number	***Our reference***	***Certificate validity period***
26100380	SD/84932163	from 16.02.2018 to 15.02.2023

Basis of research

PC-TUV-I21 Procedure for the certification of structures for the fitting of photovoltaic panel systems

PB-TUV-78: 2012 Solar panel mounting system. Safety requirements and test methods based on:

PN-EN 1990:2004	PN-EN 1991-1-1:2004	PN-EN 1991-1-3:2005
PN-EN 1991-1-4:2008	PN-EN 1993-1-1:2006	PN-EN 1993-1-3:2008
PN-EN 1999-1-1:2011		

TÜV Rheinland Polska Sp. z o.o. declares that the product described below meets the requirements contained in the reference documents:

Mounting systems for photovoltaic panels:
- free-standing structures - W-H... ; W-V... ;
- structures for pitched roofs - DS-V... ; DS-H... ;
- structures for flat roofs - DP-DT... ; DP-DN... ;
- structures for facades and balustrades - E-V... ; E-H... ; B-V...; B-H...

TÜV Rheinland Polska Sp. z o.o.
st. Wolności 347,
41-800 Zabrze, Polska
tel.: +48 32 271 64 89
e-mail: post@pl.tuv.com

TÜV Rheinland Polska Sp. z o.o. TÜVRheinland Product Safety

Certification body

Tomasz Opaszowski

Zabrze, 22.09.2022

This certificate is subject to the Certification Terms and Conditions and the JCW TRP General Transaction Conditions and applies only to the products that are compliant with the standard used for compliance assessment. This certificate alone does not entitle the holder to affix the CE mark.
This certificate entitles the holder to affix the product with the TUV mark.

TÜVRheinland CERTIFIED
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Regular
Production
Surveillance
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Form F14-WA certificate

page 1/1

CERTIFICATE

conformity of the Factory Production Control

2627-CPR-1090-1.PL0159.TÜVRh.21.00

In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulations - CPR)

This certificate applies to the following construction product:

Construction product	Structural components and kits for aluminium structures to EXC2 according to EN 1090-3:2008
Intended use	for load-bearing structures in all types of buildings
CE-marking method	ZA.3.2, ZA.3.4 according to EN 1090-1:2009+A1:2011
Manufacturer	**BAKS - Kazimierz Sielski** ul. Jagodne 5 05-480 Karczew Poland
Manufacturing plant Production facility of the manufacturer	ul. Jagodne 5, 05-480 Karczew
Confirmation	This certificate attests that all provisions concerning the assessment and verification of constancy of performance described in Annex ZA of the harmonised standard EN 1090-1:2009+A1:2011 under system 2+ are applied, and that the factory production control fulfills all the prescribed requirements stated therein.
Date of first issue	05.08.2020
Next Surveillance inspection	04.08.2023
Period of validity	This certificate will remain valid as long as the test methods and/or the factory production control requirements included in the harmonised standard used to assess the performance of the declared characteristics do not change, and the product and the manufacturing conditions in the plant are not modified significantly.
Place and date of issue	Zabrze, 05.08.2021

Leszek Zadroga
Notified Body

TÜVRheinland 2627 Notified Body

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PCA Polskie Centrum Akredytacji
AC 141

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ZERTIFIKAT
CERTIFICATE

Auftraggeber / Hersteller *Client / Manufacturer*	**BAKS – Kazimierz Sielski** **ul. Jagodne 5** **PL-05-480 Karczew**
Erzeugnis *Product*	**Kabelträgersystem für elektrische Installation** ***Cable tray systems and cable ladder systems***
Prüfbericht Nr. / *Test Report Ref. No.*	**5018795-5430-0001/219753**
Typenbezeichnung *Type designation*	**Siehe Prüfbericht / see Test Report**
Technische Merkmale *Technical characteristics*	**Siehe Prüfbericht / see Test Report**
Angewandte Normen *Applied standards*	**DIN EN 61537 (VDE 0639):2007-9;** **EN 61537:2007**
Geprüfte Abschnitte *Tested clauses*	**Abschnitt 11.1: Elektrische Leiteigenschaften** ***Sub clause 11.1: Electrical continuity***

Ein Muster dieses Erzeugnisses wurde geprüft und die Übereinstimmung mit den angewandten Normen festgestellt. Der oben genannte Prüfbericht ist Grundlage dieses Zertifikates.
A sample of the product has been tested and found to be in conformity with the applied standards. The above mentioned Test Report is part of this certificate.

Dieses Zertifikat darf Dritten nur in Verbindung mit dem oben genannten Prüfbericht im vollen Wortlaut und unter Angabe des Ausstellungsdatums zur Kenntnis gegeben werden.
This certificate may only be passed to a third party in combination with the above mentioned Test Report in its complete wording and the date of issue.

VDE Prüf- und Zertifizierungsinstitut GmbH
VDE Testing and Certification Institute GmbH
Kategorie CC4
Category CC4

Für den Binnenmarkt der Europäischen Union (EU) ist das VDE-Prüfinstitut unter der Kenn-Nr. 0366 notifiziert worden.
The VDE Testing and Certification Institute has been notified with the Identification Number 0366 for the Internal Market of the European Union (EU).

D-63069 Offenbach am Main, **13. April 2016**
Merianstraße 28

Deutscher Akkreditierungs Rat
DAR
DAT-P-024/92-03

Tel. (+49) (069) 8306-237 · Fax (+49) (069) 8306-745 · e-mail: Reiner.Lehrer@vde.com

ZERTIFIKAT
CERTIFICATE

Auftraggeber / Hersteller *Client / Manufacturer*	**BAKS – Kazimierz Sielski** **ul. Jagodne 5** **PL-05-480 Karczew**
Erzeugnis *Product*	**Kabelträgersystem für elektrische Installation** ***Cable tray systems and cable ladder systems***
Prüfbericht Nr. / *Test Report Ref. No.*	**5018795-5430-0001/228892**
Typenbezeichnung *Type designation*	**Siehe Prüfbericht / see Test Report**
Technische Merkmale *Technical characteristics*	**Siehe Prüfbericht / see Test Report**
Angewandte Normen *Applied standards*	**DIN EN 61537 (VDE 0639):2007-9;** **EN 61537:2007**
Geprüfte Abschnitte *Tested clauses*	**Abschnitt 11.1: Elektrische Leiteigenschaften** ***Sub clause 11.1: Electrical continuity***

Ein Muster dieses Erzeugnisses wurde geprüft und die Übereinstimmung mit den angewandten Normen festgestellt. Der oben genannte Prüfbericht ist Grundlage dieses Zertifikates.
A sample of the product has been tested and found to be in conformity with the applied standards. The above mentioned Test Report is part of this certificate.

Dieses Zertifikat darf Dritten nur in Verbindung mit dem oben genannten Prüfbericht im vollen Wortlaut und unter Angabe des Ausstellungsdatums zur Kenntnis gegeben werden.
This certificate may only be passed to a third party in combination with the above mentioned Test Report in its complete wording and the date of issue.

VDE Prüf- und Zertifizierungsinstitut GmbH
VDE Testing and Certification Institute GmbH
Kategorie CC4
Category CC4

A. Herzog

D-63069 Offenbach am Main, **23. August 2016**
Merianstraße 28

Für den Binnenmarkt der Europäischen Union (EU) ist das VDE-Prüfinstitut unter der Kenn-Nr. 0366 notifiziert worden.
The VDE Testing and Certification Institute has been notified with the Identification Number 0366 for the Internal Market of the European Union (EU).

Deutscher Akkreditierungs Rat
DAR
DAT-P-024/92-03

Tel. (+49) (069) 8306-237 · Fax (+49) (069) 8306-745 · e-mail: Reiner.Lehrer@vde.com

Certificate

Standard **ISO 9001:2015**

Certificate Registr. No. **01 100 1331984**

Certificate Holder:

BAKS Kazimierz Sielski
ul. Jagodne 5
05-480 Karczew
Poland

Scope: design and production of METAL support systems for cables, wires, ventilation channels, powder coating, HOT-DIP galvanizing

Proof has been furnished by means of an audit that the requirements of ISO 9001:2015 are met.

Validity: The certificate is valid from 2020-04-19 until 2023-04-18.
First certification 2001

2020-03-11

Grzegorz Grabka

TÜV Rheinland Cert GmbH
Am Grauen Stein · 51105 Köln

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DAkkS Deutsche Akkreditierungsstelle D-ZM-16031-01-00

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Certificate

Standard **ISO 14001:2015**

Certificate Registr. No. **01 104 1541861**

Certificate Holder:

BAKS Kazimierz Sielski
ul. Jagodne 5
05-480 Karczew
Poland

Scope: design and production of METAL support systems for cables, wires, ventilation channels, powder coating, HOT-DIP galvanizing

Proof has been furnished by means of an audit that the requirements of ISO 14001:2015 are met.

Validity: The certificate is valid from 2020-02-27 until 2023-02-26.
First certification 2017

2020-03-11

Grzegorz Grabka

TÜV Rheinland Cert GmbH
Am Grauen Stein · 51105 Köln

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DAkkS Deutsche Akkreditierungsstelle D-ZM-16031-01-00

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The BAKS company is aware of its impact on the natural environment and therefore in all its activities is guided by care for natural resources and responsibility for the state of the environment. We operate in accordance with the requirements of ISO 14001:2015, as confirmed by the certificate below.

NATIONAL DECLARATION OF PERFORMANCE
NR 1/2022

CE

1. Product name:
   Mounting systems for photovoltaic panels including free-standing constructions, constructions for flat roofs, constructions for inclined roofs, façade constructions and balustrade constructions, the specifications of which can be found in the BAKS catalogue.
   Flat roofs: DP-DNH..., DP-DTH..., DP-DTAV..., DP-DTV...,
   Inclined roofs: DS-H1..., DS-H2..., DS-H3..., DS-H4..., DS-H5..., DS-H6..., DS-H7..., DS-V1..., DS-V2..., DS-V3..., DS-V4..., DS-V5..., DS-V6..., DS-H7....
   Free-standing constructions: W-H4...2, W-H4...2-BI, W-H5...2, W-H6...2, W-V2...2, W-V2...2-BI, W-V3...2, W-H3...1, W-V2...1
   Constructions for facades and balustrades: E-H..., E-V..., B-H....., B-V...
2. Scope of application:
   The structures are used as support structures for photovoltaic modules mounted on flat roofs, inclined roofs and on the ground.
3. Manufacturer:
   „BAKS" Kazimierz Sielski ul. Jagodne 5, 05-480 Karczew
4. Authorised representative: Not applicable.
5. System of assessment and verification of constancy of performance: SYSTEM 2+
   Certificate TÜV ZKP/FPC 2627-CPR_1090-1.PL0071.TÜVRh.20.01
   Certificate TÜV ZKP/FPC 2627-CPR_1090-1.PL0072.TÜVRh.20.01
   Certificate TÜV SZJ ISO 9001:2015 nr 011001331984
   Certificate TÜV product no. TM 61000362.001
6. Harmonised standard:: PN-EN 1090-1:2012
7. Declared performance characteristics:

Essential product characteristics	Declared performance characteristics	Harmonised technical specification
Construction class	EX2	PN-EN 1090-2:2018 PN-EN 1090-3:2019
Dimension tolerance	Class 1	PN-EN 1090-2:2018 PN-EN 1090-3:2019
Weldability	NPD	PN-EN 1090-2:2018 PN-EN 1090-3:2019
Resistance to fracture	NPD	PN-EN 1090-2:2018 PN-EN 1090-3:2019
Tensile strength	NPD	PN-EN 1090-2:2018 PN-EN 1090-3:2019
Load capacity and deformation	According to the design and calculations for the type of construction in conformity with PN-EN 1990:2004; PN-EN 1991-1-1:2004; PN-EN 1991-1-3:2005; PN-EN 1991-1-4:2008, PN-EN 1993-1-1:2006, PN-EN 1993-1- 3:2008, PN EN 1999-1-1:2011	PN-EN 1090-2:2018 PN-EN 1090-3:2019
Response to fire	NPD	PN-EN 1090-2:2018 PN-EN 1090-3:2019
Fire resistance	NPD	PN-EN 1090-2:2018 PN-EN 1090-3:2019
Cadmium content	NPD	PN-EN 1090-2:2018 PN-EN 1090-3:2019
Radioactive content	NPD	PN-EN 1090-2:2018 PN-EN 1090-3:2019
Durability	NPD	PN-EN 1090-2:2018 PN-EN 1090-3:2019

8. The performance of the product identified above is in conformity with the set of declared performance characteristics. This national declaration of performance is issued in accordance with Regulation (EU) No 305/2011 under the sole responsibility of the manufacturer.

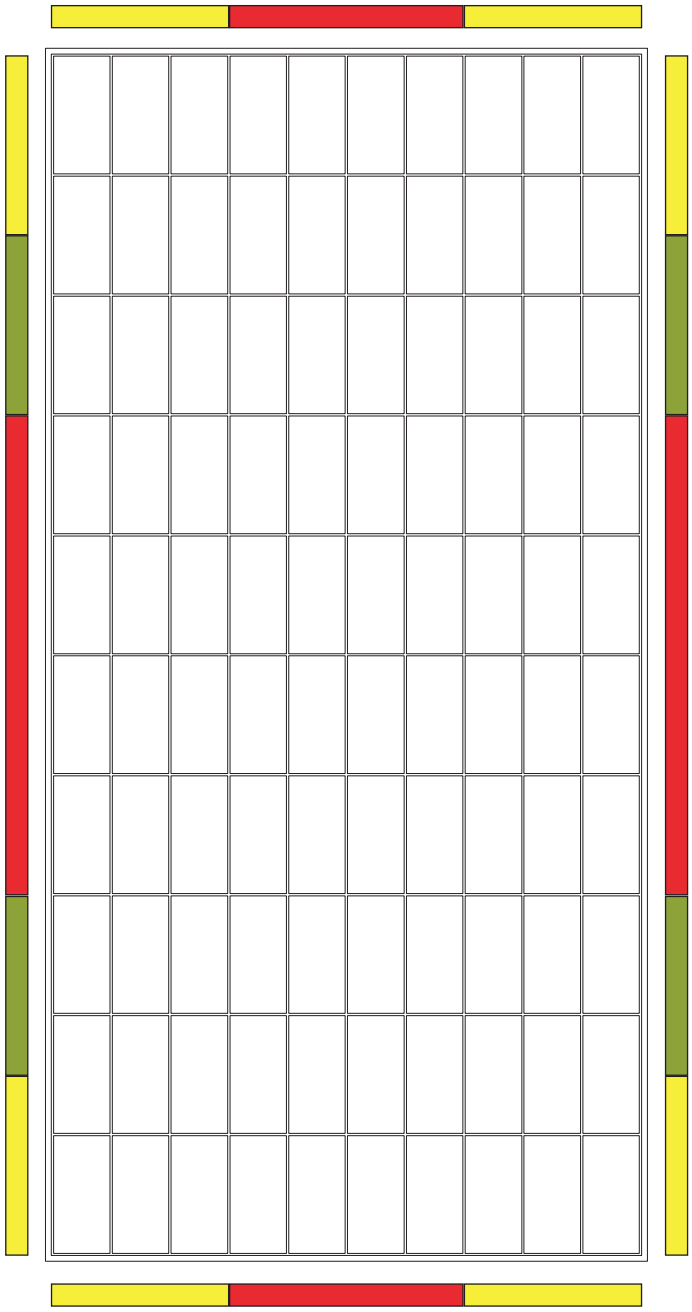
Karczew 03.10.2022

Kazimierz Sielski

.....

Signed

PV panels mounting areas



Mounting of clamps in green area allows PV panel loading up to 5400 Pa (550 kg/m²)

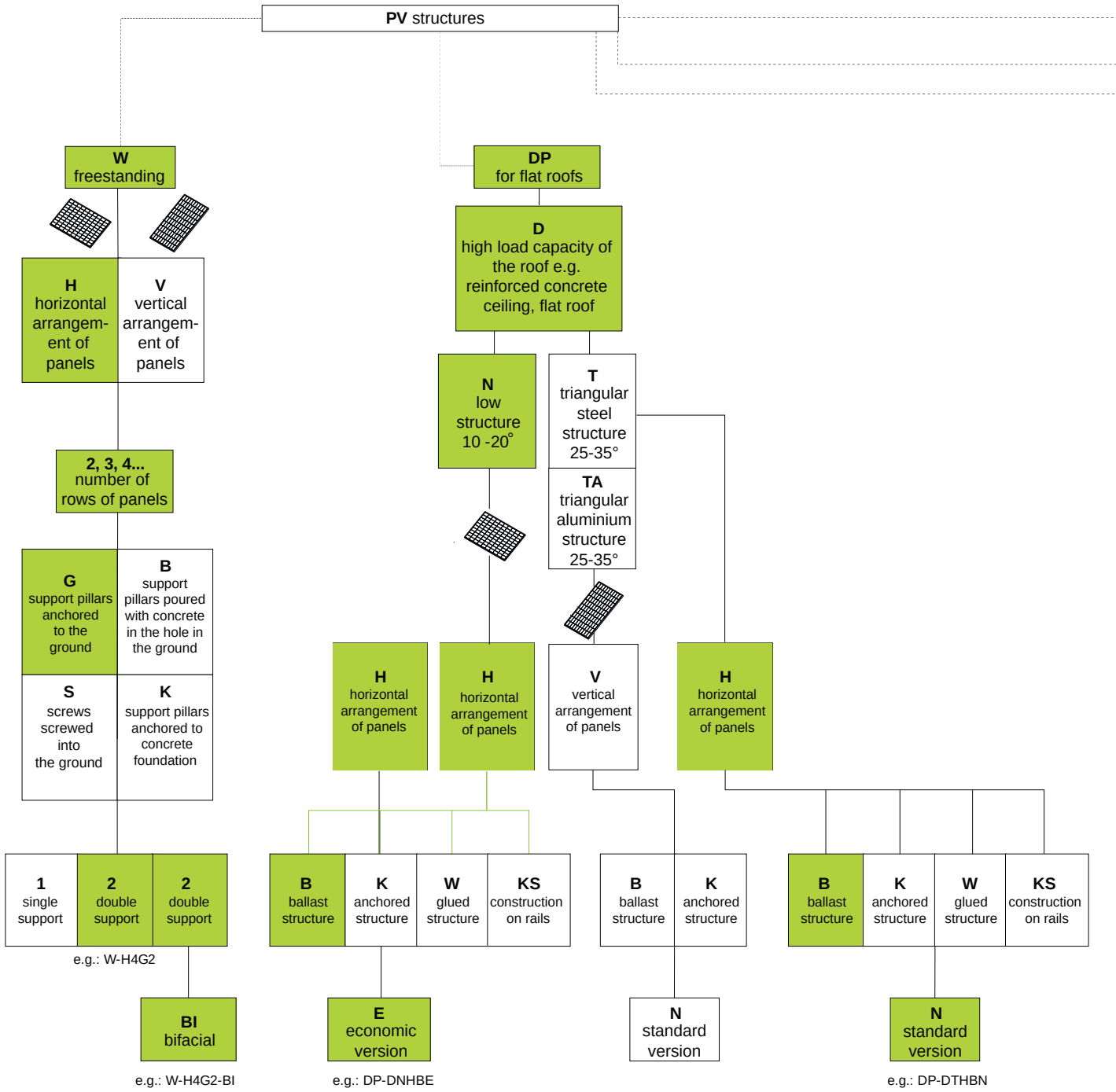
Mounting of clamps in yellow area allows PV panel loading up to 2400 Pa (244 kg/m²)*

Mounting of clamps in red area is not allowed

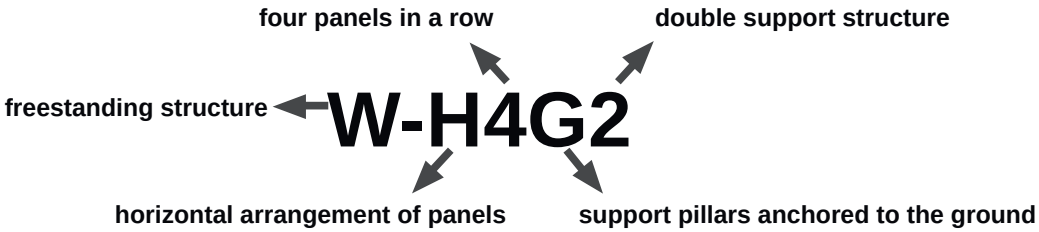
Note:
Please refer to the assembly instructions for the PV panel mounting area.
There should be a minimum of four clamps in the mounting zone of the same colour to ensure that the panel installation complies with the requirements of PV module manufacturers for the appropriate load. If the panel is mounted with four clamps but placed in two different areas, it is adjusted for the lower load. While choosing the direction on the arragement of the panels, please take into consideration maximum load capacity of the PV panel specified by the manufacturer, which depends on the arragement of the panels (vertical or horizontal) and differs depending on the height of the frame of the panel.

* - Please check the in the PV catalogue card, if the manufacturer allows the possibility of mounting on the shorter side of the PV panel.

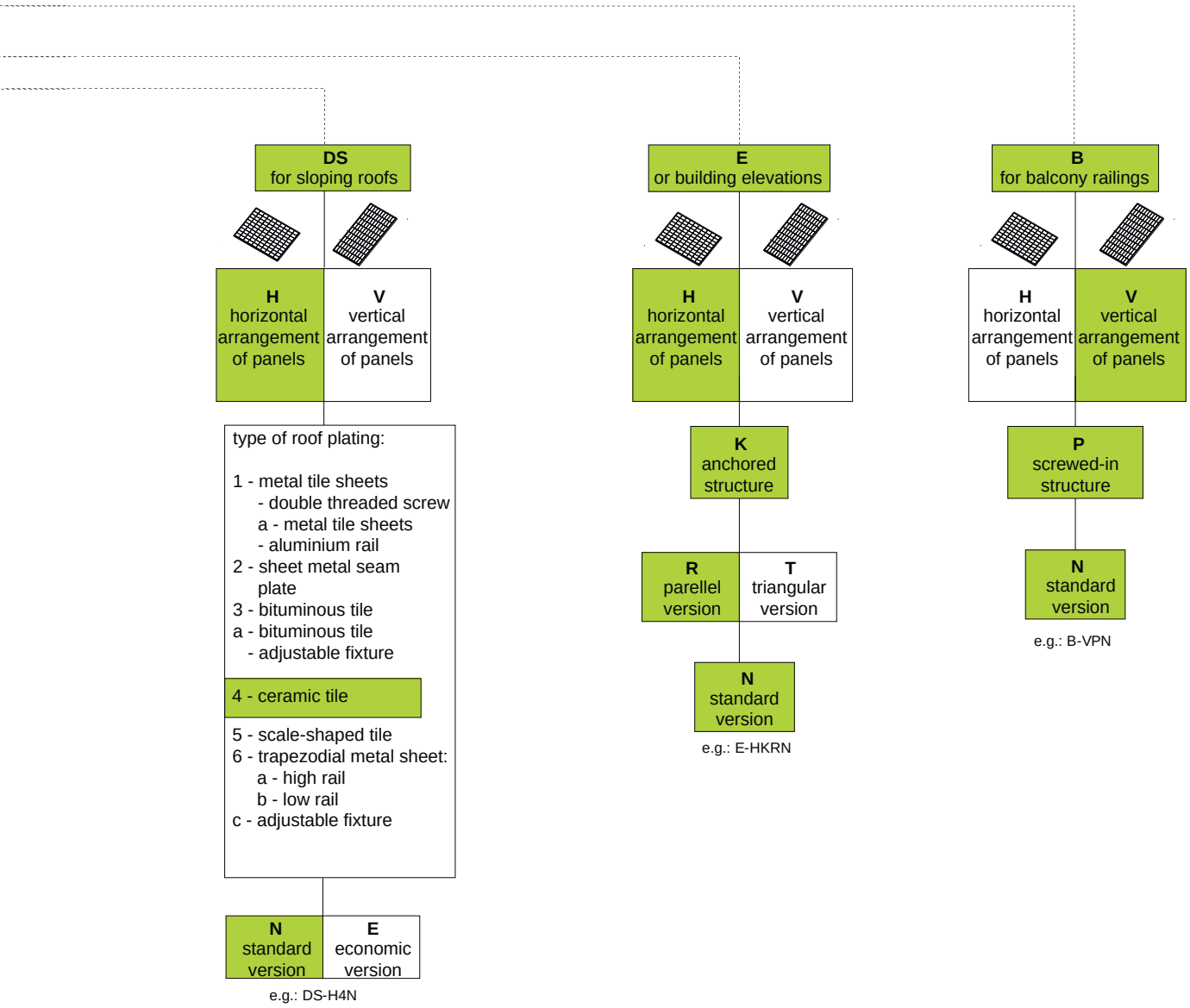
Symbols for structures for PV panels



An example selection path of a structure is marked with green

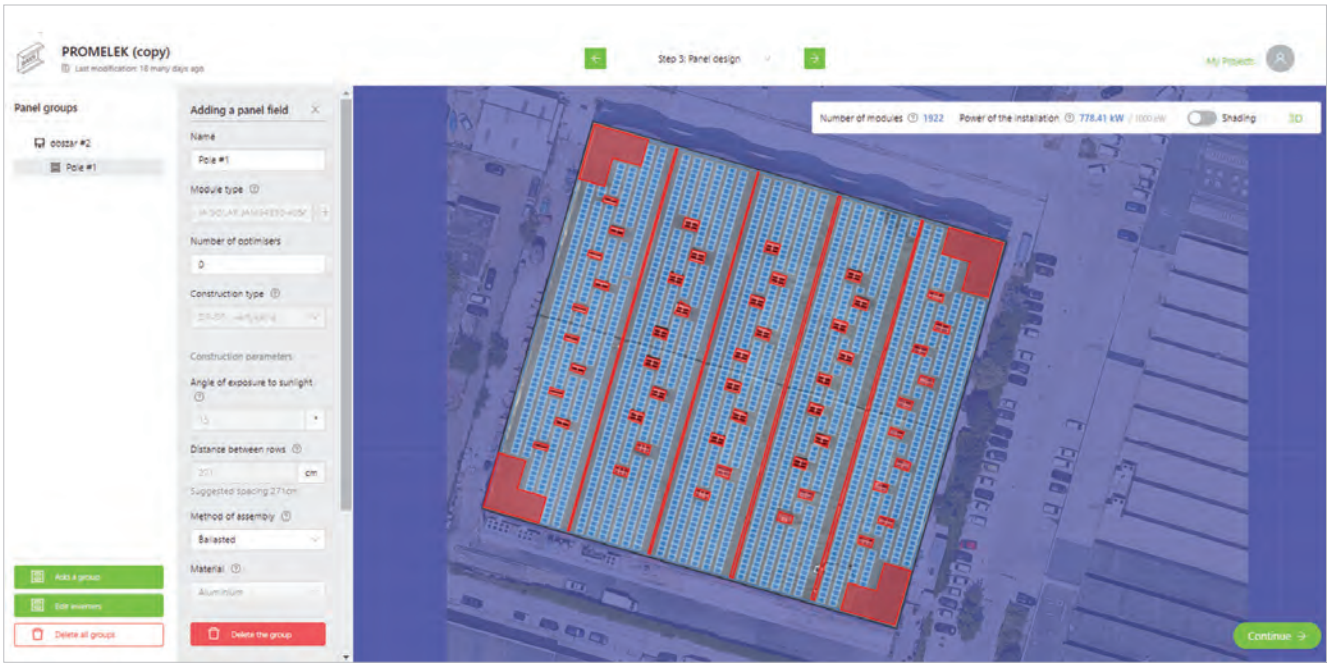


Symbols for structures for PV panels



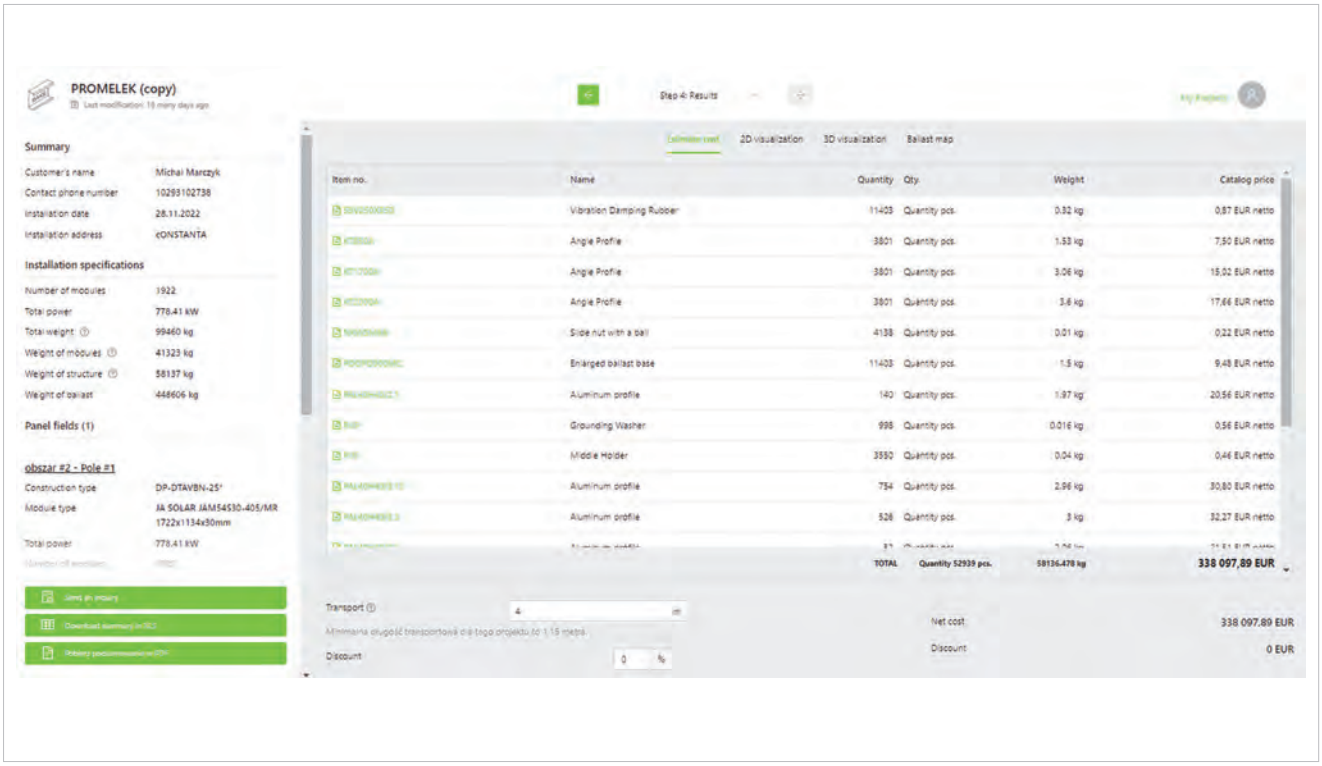
FREE PV APPLICATION
PV INSTALLATION PLANNING

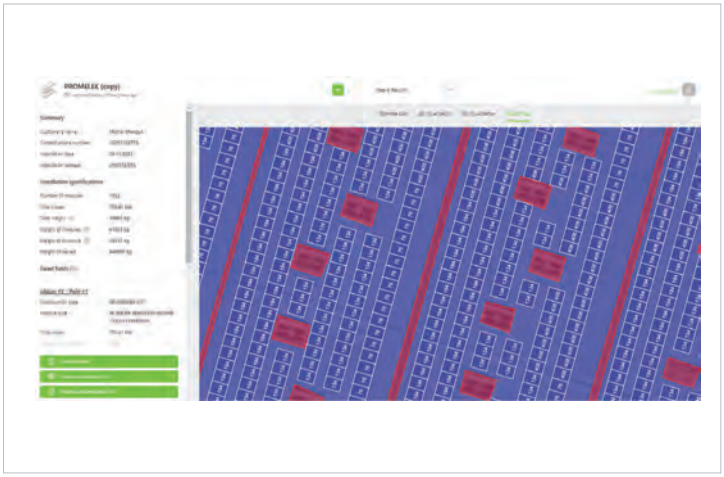
available at www.baks.com.pl under PV structures -> PV application, pv.baks.com.pl



The application allows PV systems to be planned: on inclined roofs, flat roofs, as well as free-standing constructions. All types of roofing, obstacles and shading are taken into account, which makes it possible to optimise the project for individual customer requirements.

Thanks to a user-friendly interface and prompts, users are able to design their own PV installations very easily and intuitively. An extensive database of PV modules and inverters allows the installation to be adapted to the current market situation. The application is designed for small installations, e.g. 10, 20, 50, 100kW, as well as investments of more than 1MW.





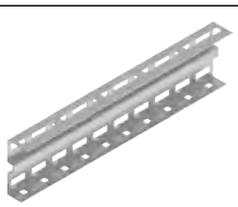
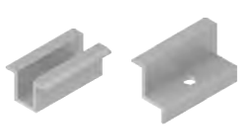
Once the design is complete, the client receives a report in the form of a PDF or Excel file with a list of the elements and their prices.
The project can be previewed in 2D and 3D.

The application is still under development. Feel free to use the application and create your own photovoltaic projects.

Freestanding mounting structures for the installation of photovoltaic panels

Freestanding structures systems:
- System: **W-V2G1** (2 panels arranged vertically on 1 support post)
- System: **W-V2G2** (2 panels arranged vertically on 2 support posts)
- System: **W-V2G2-BI** (2 panels arranged vertically on 2 support posts with bifacial panels)
- 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 posts 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:

 **Support Channel CWCR100H50...MC**	 **Profile BDFCH120...NMC**	 **Support Channel CWC100H50...NMC**	 **Channel Connector LCTW100H50MC**
 **Base Plate PCS100**	 **Channel Connector LCJ70MC**	 **Channel Connector LCD100MC**	 **Middle and Side Holders PUF and BUF...**

Advantages of freestanding mounting structures for the installation of photovoltaic panels

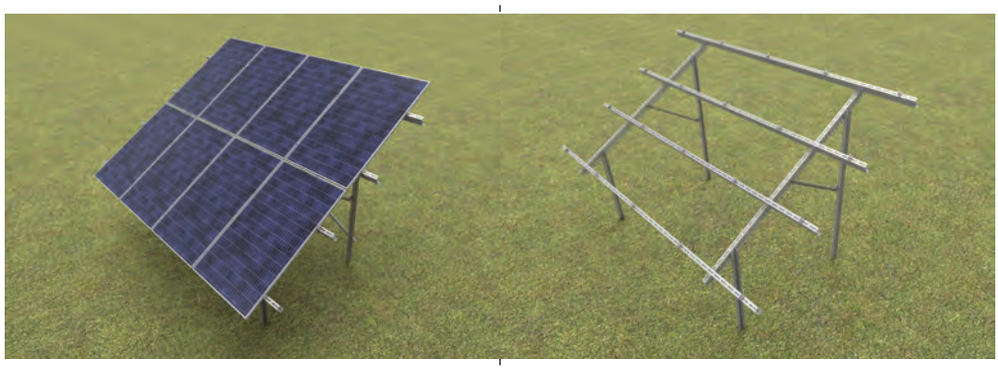
- dense profile perforation provides a wide adjustment range without drilling
- longitudinal profile perforation allows for smooth adjustment of the inclination angle of the structure in relation to the ground within the range of 20-35 degrees
- possibility of assembling the structure - with only one 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
- by using u-profiles, there is a possibility of laying cables in it safely
- thanks to the use of the SPV wire clip, the cables laid in the CWC100H50..NMC support channel are protected against falling out and using unaesthetic and nondurable cable ties can be avoided
- the top perforation of the CWC100H50...NMC support channel allows for quick installation of clamps when using NRM8PV channel nuts
- 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
- the use of mounting templates allows for quick determination of location of holes for screwing on subsequent elements of the structure and mounting clamps
- products made in Poland!

Systems:

			
W-V2...2	**W-V2...2-BI**	**W-H4...2**	**W-H4...2-BI**
			
W-V2...1	**W-V3...2**	**W-H5...2**	**W-H6...2**

PV structures

FREE-STANDING CONSTRUCTION
System: **W-V2G2-30°-N**



INSTALLATION INPUT DATA:	**EXAMPLES**
Panel dimensions:	Panel dimensions: **2094 x 1038 x 35 mm**
Tilt angle:	**30°**
Installation location:	**ŁÓDŹ (close to)**
Panel layout:	**VERTICAL**
Method of mounting the structure to the ground:	**G: Construction driven-in the ground**

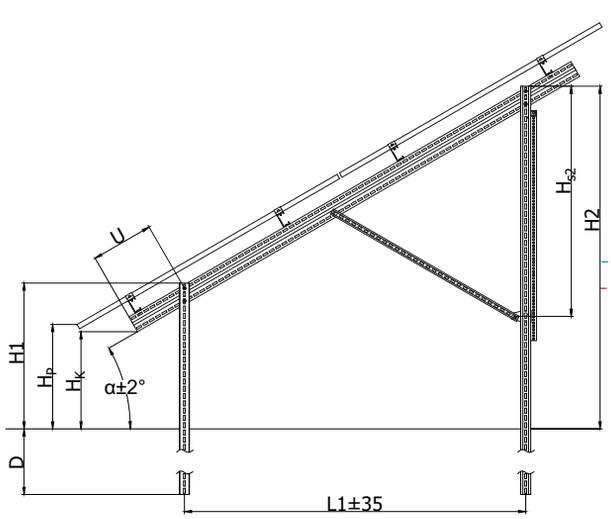


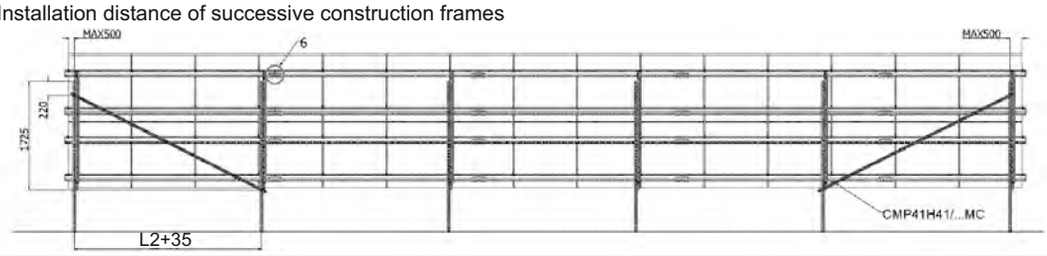
Table 1 Lengths of construction elements depending on panel size

Construction angle „a”	Front support pillar	Rear support pillar	Rafter	Bracing No. 1
PANEL LENGTHS FROM 1600 TO 1700 mm CONSTRUCTION VARIANT A				
25°	CT70H50/3NMC	CT70H50/4NMC	BDFCH100/2,75NMC	CMP41H41/1MC
30°	CT70H50/3NMC	CT70H50/4NMC	BDFCH100/2,75NMC	CMP41H41/1MC
PANEL LENGTHS FROM 1700 TO 1800 mm CONSTRUCTION VARIANT A				
25°	CT70H50/3NMC	CT70H50/4NMC	BDFCH100/3,2NMC	CMP41H41/1MC
30°	CT70H50/3NMC	CT70H50/4NMC	BDFCH100/3,2NMC	CMP41H41/1MC
PANEL LENGTHS FROM 1800 TO 2100 mm CONSTRUCTION VARIANT A				
25°	CT70H50/3NMC	CWT70H50/4,4NMC	BDFCH120/3,6NMC	CMP41H41/1,5MC
30°	CT70H50/3NMC	CWT70H50/4,4NMC	BDFCH120/3,6NMC	CMP41H41/1,5MC
PANEL LENGTHS FROM 2100 TO 2300 mm CONSTRUCTION VARIANT B				
25°	CT70H50/3NMC	CWT70H50/4,4NMC	BDFCH120/4,4NMC	CMP41H41/1,2MC + CMP41H41/1,5MC
30°	CT70H50/3NMC	CWT70H50/4,4NMC	BDFCH120/4,4NMC	CMP41H41/1,2MC + CMP41H41/1,5MC

Table 2 Dimensions of the structure depending on the angle of inclination of the structure and the size of the panels

Construction angle „a”	Distance „L1”	Height						Distance „U”
		„H1”	„H2”	„HK”	„HP”	„Hs1”	„Hs2”	
PANEL LENGTHS FROM 1600 TO 1700 mm CONSTRUCTION VARIANT A								
25°	2080	1020	1990	800	870		1030	300
30°	1680	1020	1990	700	730		1040	480
PANEL LENGTHS FROM 1700 TO 1800 mm CONSTRUCTION VARIANT A								
25°	2080	1020	1990	720	790		1030	500
30°	1680	1020	1990	650	730		1040	580
PANEL LENGTHS FROM 1800 TO 2100 mm CONSTRUCTION VARIANT A								
25°	2400	970	2100	660	730		1530	430
30°	2400	1020	2400	680	730		1600	440
PANEL LENGTHS FROM 2100 TO 2300 mm CONSTRUCTION VARIANT B								
25°	2630	1020	2240	650	720	650	1530	580
30°	2770	1020	2610	680	730	670	1600	440

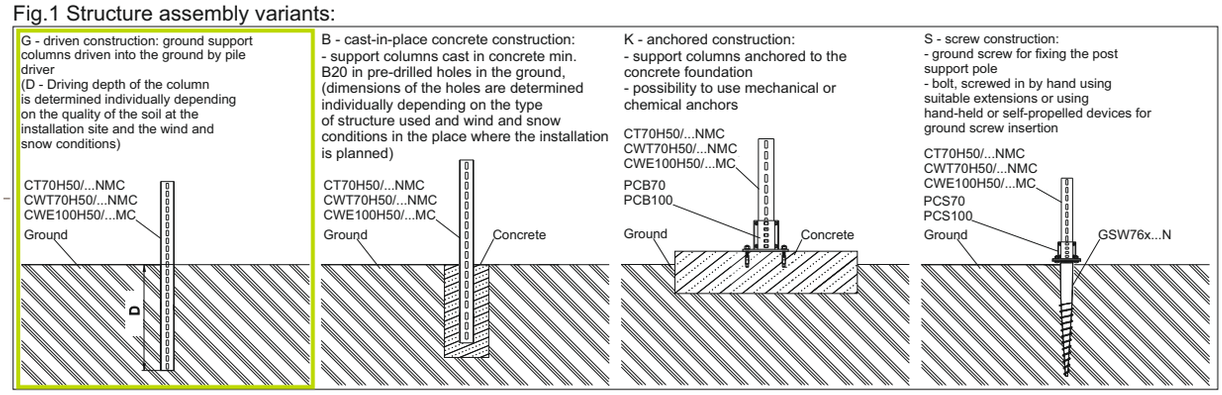
Table 3 Installation distance of successive construction frames



Combination of wind zone „W" and snow zone "S"	Maximum distance of subsequent frames "L2"
1W-1S lub 3W-1S	**2,9 m**
1W - 2S	
1W-3S lub 3W-3S	2,7 m
1W - 4S	
2W-2S lub 2W-3S	2 m
Other zone combinations	Individual selection

*L2 spacing values in snow zone 1 and 3 and wind zone 1 and 3 were assumed for locations below 300 meters above sea level.

Fig.1 Structure assembly variants:

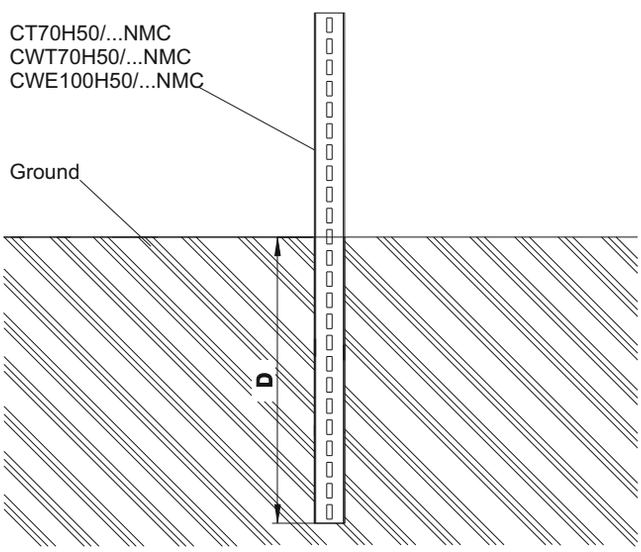


Recommended ways of mounting freestanding structures to the ground

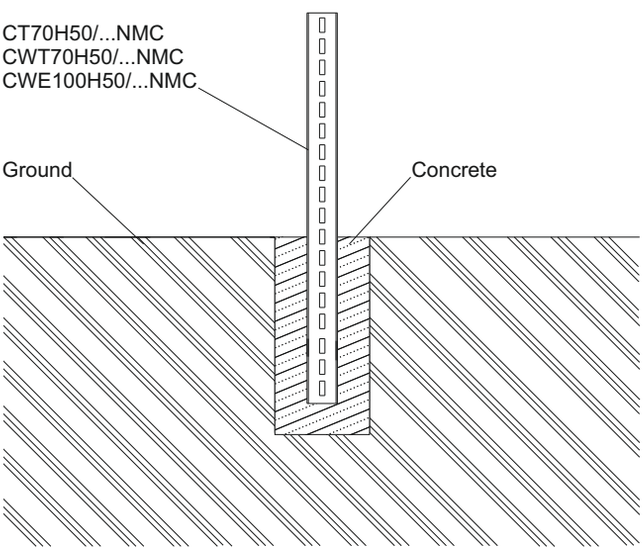
Structure mounting variants:

G - driven construction:
- ground support columns driven into the ground by pile driver

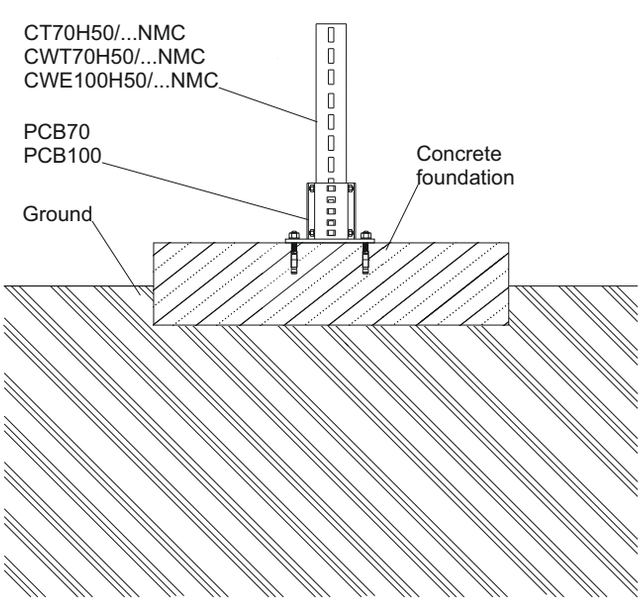
(D - Driving depth of the column is determined individually depending on the quality of the soil at the installation site and the wind and snow conditions)



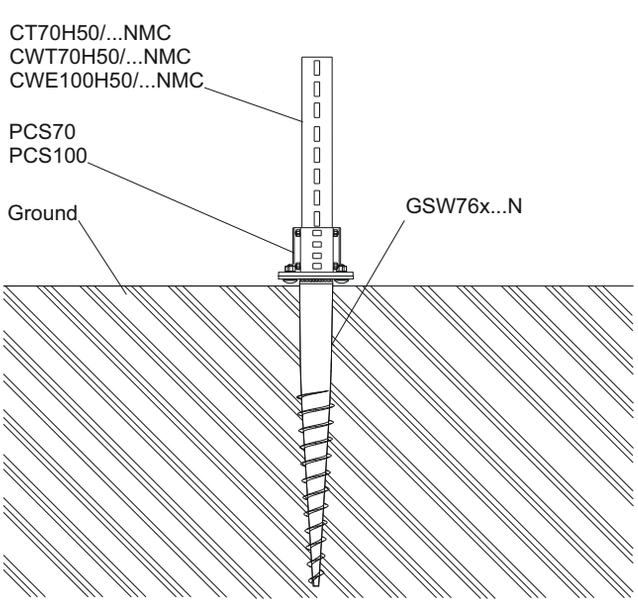
B - cast-in-place concrete construction:
- support columns cast in concrete min. B20 in pre-drilled holes in the ground, (dimensions of the holes are determined individually depending on the type of structure used and wind and snow conditions in the place where the installation is planned)



K - anchored construction:
- support columns anchored to the concrete foundation
- possibility to use mechanical or chemical anchors

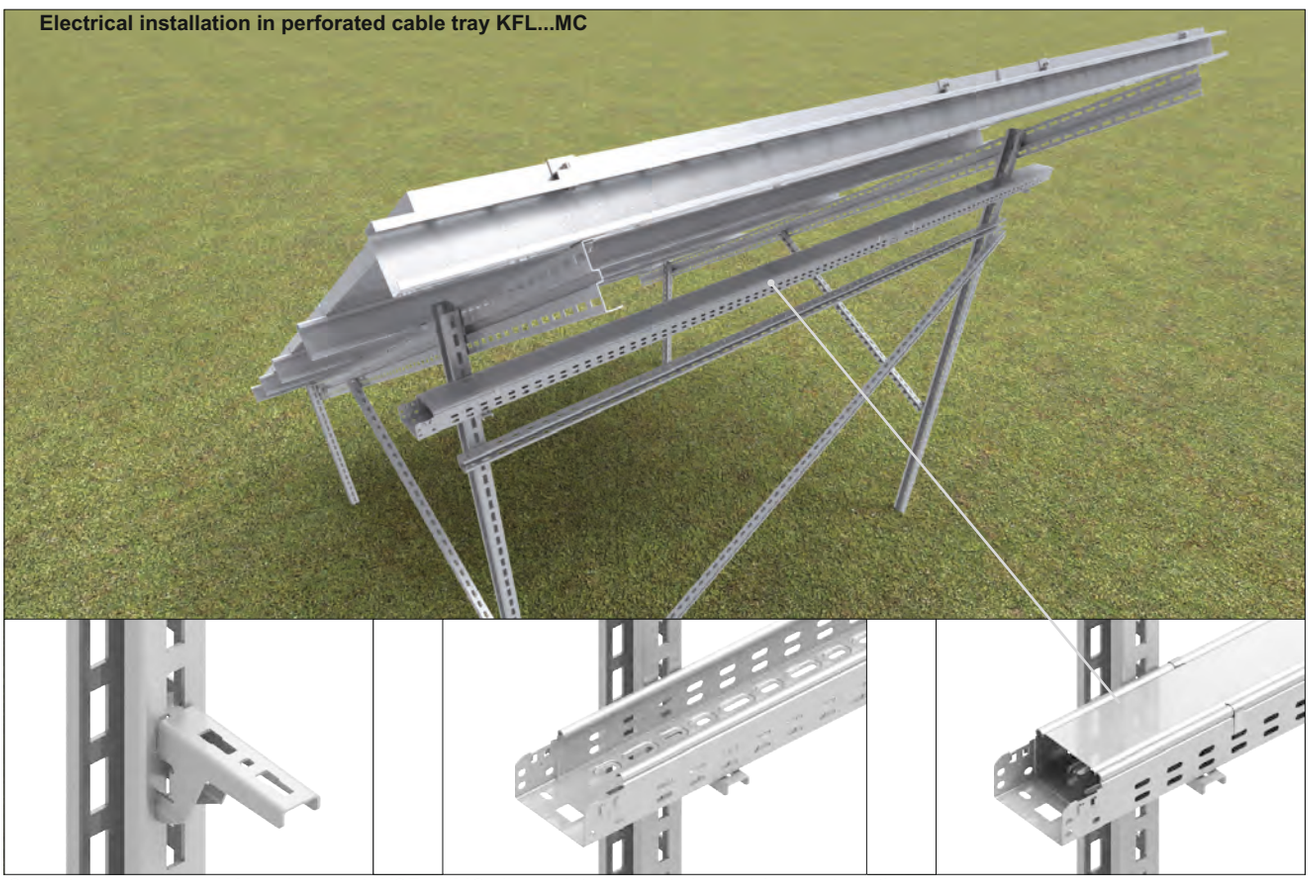


S - screw construction:
- ground screw for fixing the post support pole
- bolt, screwed in by hand using suitable extensions or using hand-held or self-propelled devices for ground screw insertion



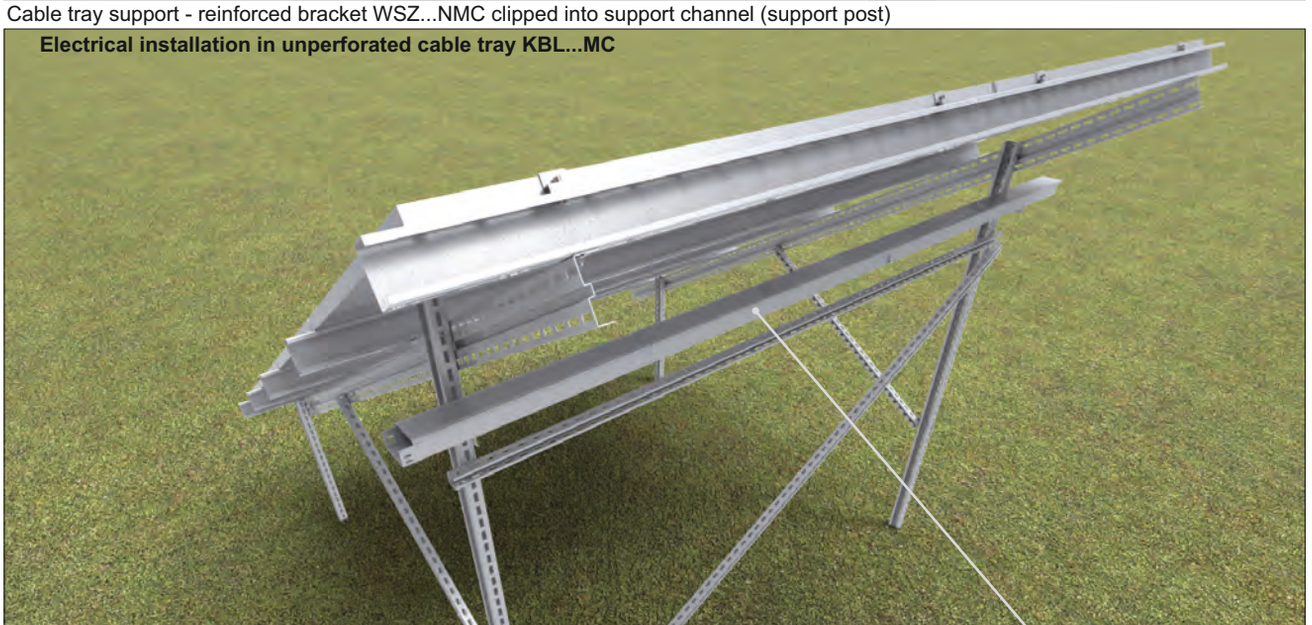
BAKS freestanding structures are adapted for the installation of BAKS brackets and cable trays. Brackets fastened to the support post with locking screws guarantee greater strength and are dedicated to structures with increased support spacing, and to installations using high-power inverters. BAKS cable trays ensure excellent heat dissipation and are resistant to direct and diffuse UV radiation. They enable quick installation of cables. They are equipped with covers, which protect cables against damage by forest animals and rodents. BAKS products are certified by VDE, TÜV and ITB, which confirms the electrical continuity of the circuit and guarantees that no electrical charges are stored in the earthed structure.

Electrical installation in perforated cable tray KFL...MC



Cable tray support - reinforced bracket WSZ...NMC clipped into support channel (support post)

Electrical installation in unperforated cable tray KBL...MC



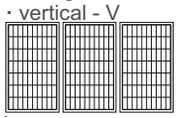
Freestanding mounting structure for the installation of photovoltaic panels
System: **W-V2G2-25°**

ST

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

Technical description:
Materials of the support system:
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
Structure tested for strength.

Arrangement of the modules:
· vertical - V

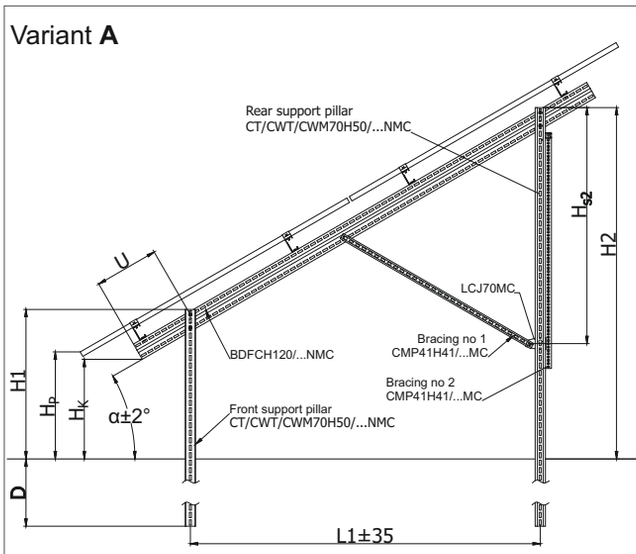


Ground conditions:
· soil with good/high load capacity

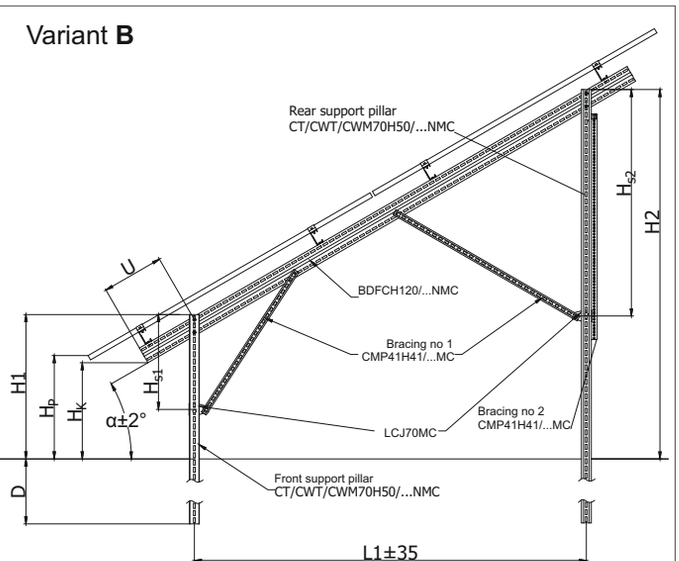
Structure assembly variants:
· W-H2G2 structure - rammed into the ground (anchorage depth depends on ground conditions)
· W-H2K2 structure - support posts anchored to the concrete foundation
· W-H2B2 structure - support posts poured with concrete min. B20 in the holes made in the ground (size of the holes depends on the ground conditions)
· W-H2S2 structure - on request, a screw screwed into the ground for fixing of the support posts
· W-H2...2-WZ structure - east-west option

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.

Variant **A**



Variant **B**



Information:
Detailed dimensions of the components included in the construction can be found in the table on the next page.

Attention:
Please refer to the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

Detailed information on the products can be found on pages 59-110

DIMENSIONS OF CONSTRUCTION - FREE-STANDING CONSTRUCTION

System: W-V2G2-25°

Lengths of construction elements depending on panel size

Construction angle „α”	Front support pillar	Rear support pillar	Rafter	Bracing No. 1
PANEL LENGTHS FROM 1600 TO 1700 mm CONSTRUCTION VARIANT A				
25°	CT70H50/3NMC	CT70H50/4NMC	BDFCH100/2,75NMC	CMP41H41/1MC
30°	CT70H50/3NMC	CT70H50/4NMC	BDFCH100/2,75NMC	CMP41H41/1MC
PANEL LENGTHS FROM 1700 TO 1800 mm CONSTRUCTION VARIANT A				
25°	CT70H50/3NMC	CT70H50/4NMC	BDFCH100/3,2NMC	CMP41H41/1MC
30°	CT70H50/3NMC	CT70H50/4NMC	BDFCH100/3,2NMC	CMP41H41/1MC
PANEL LENGTHS FROM 1800 TO 2100 mm CONSTRUCTION VARIANT A				
25°	CT70H50/3NMC	CWT70H50/4,4NMC	BDFCH120/3,6NMC	CMP41H41/1,5MC
30°	CT70H50/3NMC	CWT70H50/4,4NMC	BDFCH120/3,6NMC	CMP41H41/1,5MC
PANEL LENGTHS FROM 2100 TO 2300 mm CONSTRUCTION VARIANT B				
25°	CT70H50/3NMC	CWT70H50/4,4NMC	BDFCH120/4,4NMC	CMP41H41/1,2MC + CMP41H41/1,5MC
30°	CT70H50/3NMC	CWT70H50/4,4NMC	BDFCH120/4,4NMC	CMP41H41/1,2MC + CMP41H41/1,5MC

Dimensions of the structure depending on the angle of inclination of the structure and the size of the panels

Construction angle „α”	Distance „L1”	Height						Distance „U”
		„H1”	„H2”	„H_K”	„H_P”	„Hs_1”	„Hs_2”	
PANEL LENGTHS FROM 1600 TO 1700 mm CONSTRUCTION VARIANT A								
25°	2080	1020	1990	800	870		1030	300
30°	1680	1020	1990	700	730		1040	480
PANEL LENGTHS FROM 1700 TO 1800 mm CONSTRUCTION VARIANT A								
25°	2080	1020	1990	720	790		1030	500
30°	1680	1020	1990	650	730		1040	580
PANEL LENGTHS FROM 1800 TO 2100 mm CONSTRUCTION VARIANT A								
25°	2400	970	2100	660	730		1530	430
30°	2400	1020	2400	680	730		1600	440
PANEL LENGTHS FROM 2100 TO 2300 mm CONSTRUCTION VARIANT B								
25°	2630	1020	2240	650	720	650	1530	580
30°	2770	1020	2610	680	730	670	1600	440

Detailed information on the products can be found on pages 59-110

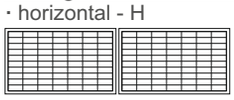
Freestanding mounting structure for the installation of photovoltaic panels
System: **W-H4G2-25° (optionally 30°)**

ST

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

Technical description:
Materials of the support system:
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
Structure tested for strength.

Arrangement of the modules:
· horizontal - H

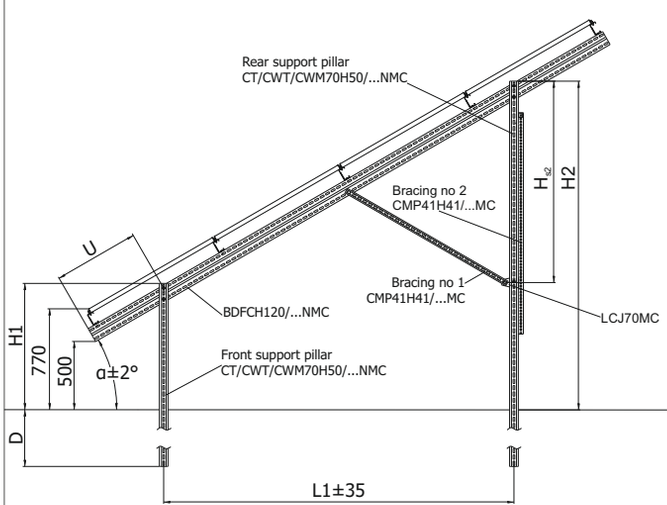


Ground conditions:
· soil with good/high load capacity

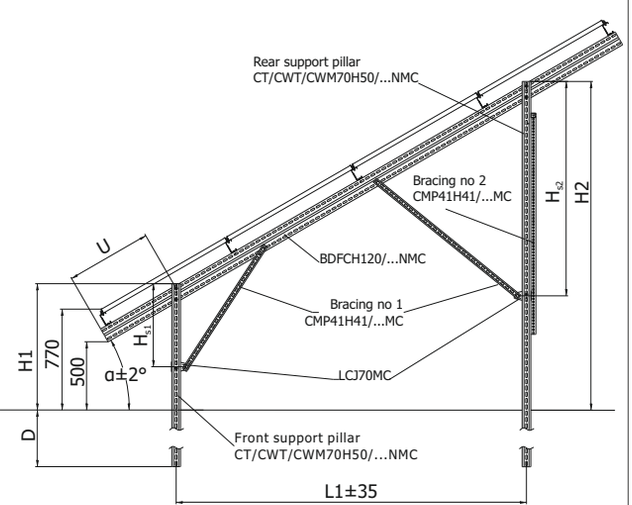
Structure assembly variants:
· W-H4G2 structure - rammed into the ground (anchorage depth depends on ground conditions)
· W-H4K2 structure - support posts anchored to the concrete foundation
· W-H4B2 structure - support posts poured with concrete min. B20 in the holes made in the ground (size of the holes depends on the ground conditions)
· W-H4S2 structure - on request, a screw screwed into the ground for fixing of the support posts
· W-H4...2-WZ structure - east-west option

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.

Variant **A**



Variant **B**



Information:
Detailed dimensions of the components included in the construction can be found in the table on the next page.

Attention:
Please refer to the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

Detailed information on the products can be found on pages 59-110

DIMENSIONS OF CONSTRUCTION - FREE-STANDING CONSTRUCTION

System: W-H4G2-25°

Lengths of construction elements depending on panel size

Construction angle „α”	Front support pillar	Rear support pillar	Rafter	Bracing No. 1
PANEL LENGTHS FROM 950 TO 1050 mm CONSTRUCTION VARIANT A				
25°	CWT70H50/3NMC	CWT70H50/4,4NMC	BDFCH120/4,4NMC	CMP41H41/1,5MC
30°	CWT70H50/3NMC	CWT70H50/4,4NMC	BDFCH120/4,NMC	CMP41H41/1,5MC
PANEL LENGTHS FROM 1050 TO 1150 mm CONSTRUCTION VARIANT A				
25°	CWT70H50/3NMC	CWT70H50/4,4NMC	BDFCH120/4,8NMC	CMP41H41/1,5MC
30°	CWT70H50/3NMC	CWT70H50/4,4NMC	BDFCH120/4,8NMC	CMP41H41/1,5MC
PANEL LENGTHS FROM 1150 TO 1300 mm CONSTRUCTION VARIANT B				
25°	CWT70H50/3NMC	CWT70H50/4,4NMC	BDFCH120/5,4NMC	CMP41H41/1,5MC + CMP41H41/2,2MC
30°	CWT70H50/3NMC	CWT70H50/3NMC CWT70H50/2NMC	BDFCH120/5,4NMC	CMP41H41/1,5MC + CMP41H41/2,2MC

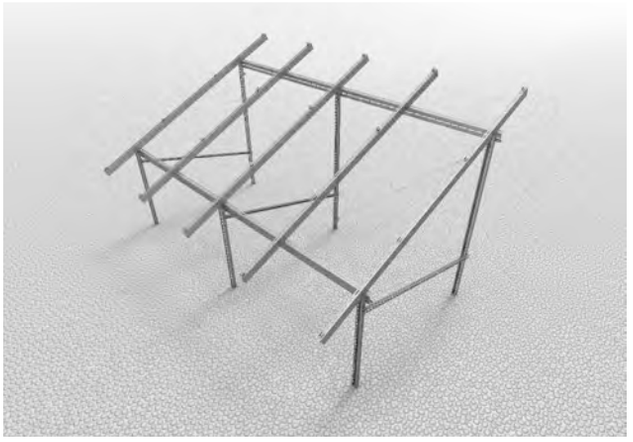
Dimensions of the structure depending on the angle of inclination of the structure and the size of the panels

Construction angle „α”	Distance „L1”	Height				Distance „U”
		„H1”	„H2”	„Hs_1”	„Hs_2”	
PANEL LENGTHS FROM 950 TO 1050 mm CONSTRUCTION VARIANT A						
25°	2820	870	2180		1520	580
30°	2520	970	2410		1620	690
PANEL LENGTHS FROM 1050 TO 1150 mm CONSTRUCTION VARIANT A						
25°	2960	950	2330		1520	780
30°	2830	970	2600		1620	690
PANEL LENGTHS FROM 1150 TO 1300 mm CONSTRUCTION VARIANT B						
25°	3370	950	2530	640	2340	780
30°	3450	970	2960	670	2440	690

Detailed information on the products can be found on pages 59-110

Freestanding mounting structure for the installation of bifacial photovoltaic panels
System: **W-V2G2-BI-25°**

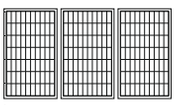
ST N



Structure description:
Complete support system for fixing bifacial panels, which use sunlight reflected from the ground

Technical description:
Materials of the support system:
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
Overview design.

Arrangement of the modules:
· vertical - V



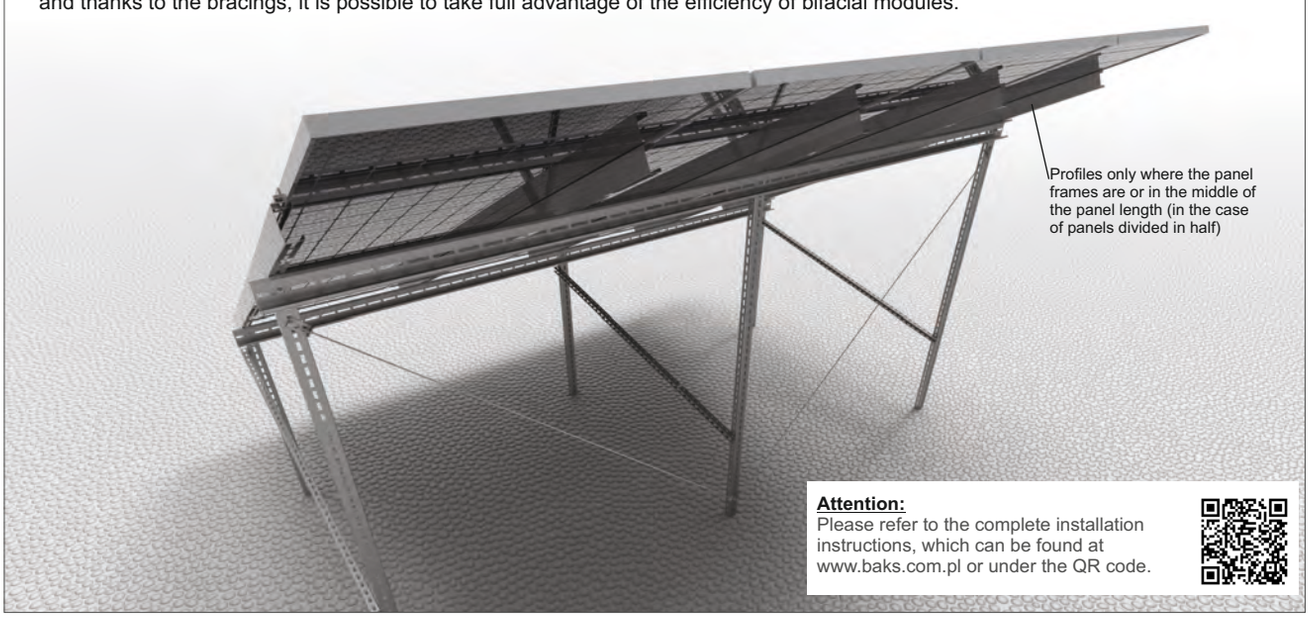
Ground conditions:
· soil with good/high load capacity

Advantages:
- the use of asymmetrical profiles with one side bent, allows a suitable construction angle and a plane prepared for direct installation of profiles on which the modules are to be placed
- the profiles with the bent side are mounted directly to the support columns without additional mounting elements mounting elements
- made of Magnelis®

Structure assembly variants:
· W-V2G2-BI structure - rammed into the ground (anchorage depth depends on ground conditions)
· W-V2K2-BI structure - support posts anchored to the concrete foundation
· W-V2B2-BI structure - support posts poured with concrete min. B20 in the holes made in the ground (size of the holes depends on the ground conditions)
· W-V2S2-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 where the panel frames are or in the middle of the panel length (in the case of panels divided in half) and thanks to the bracings, it is possible to take full advantage of the efficiency of bifacial modules.



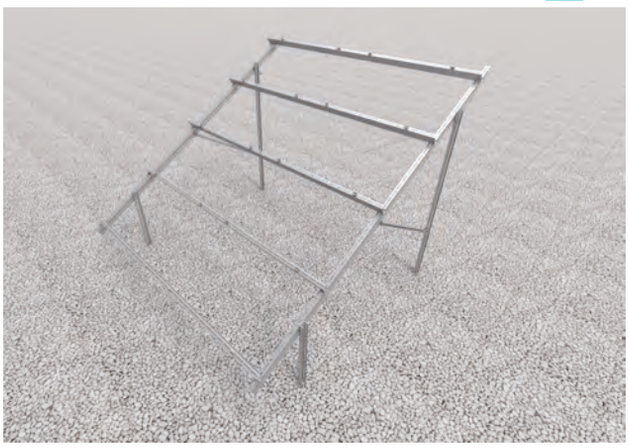
Attention:
Please refer to the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

Detailed information on the products can be found on pages 59-110

Freestanding mounting structure for the installation of bifacial photovoltaic panels

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

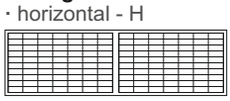
ST N



Structure description:
Complete support system for fixing bifacial panels, which use sunlight reflected from the ground

Technical description:
Materials of the support system:
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
Overview design.

Arrangement of the modules:
· horizontal - H

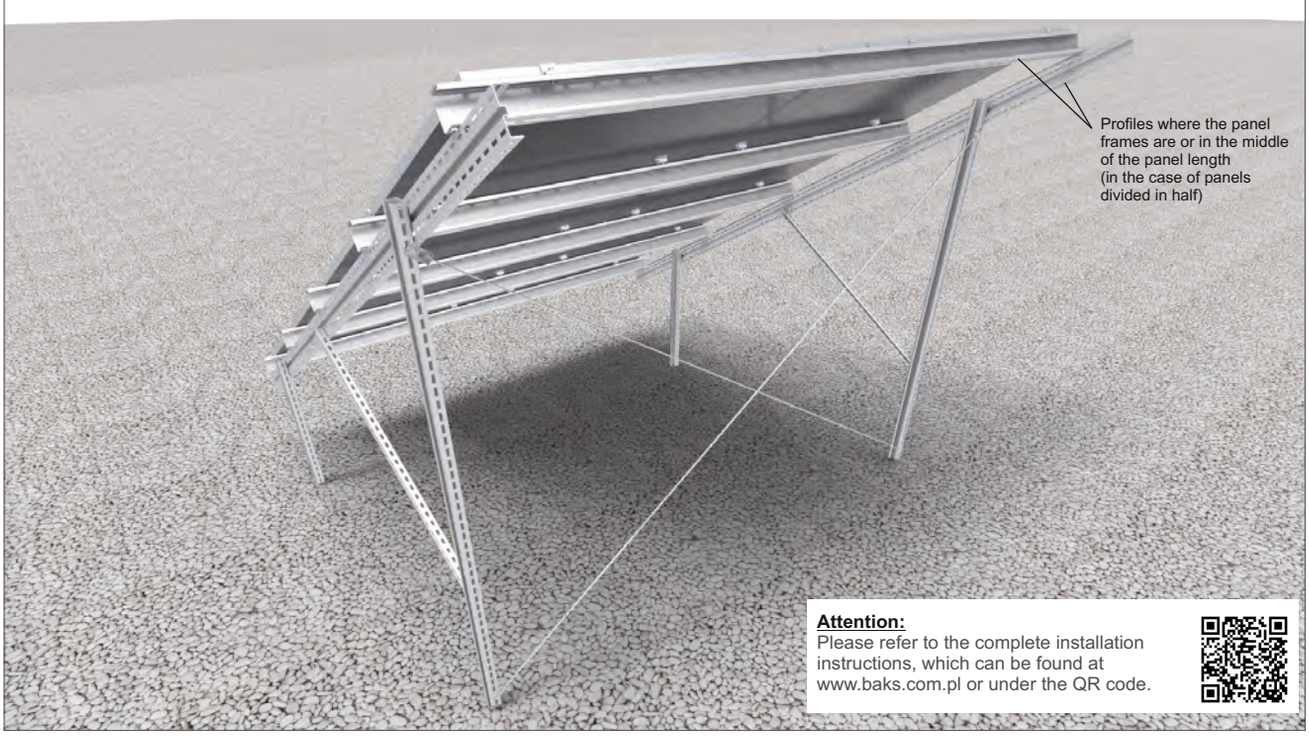


Ground conditions:
· soil with good/high load capacity

Structure assembly variants:
· W-H4G2-BI structure - rammed into the ground (anchorage depth depends 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 holes 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.

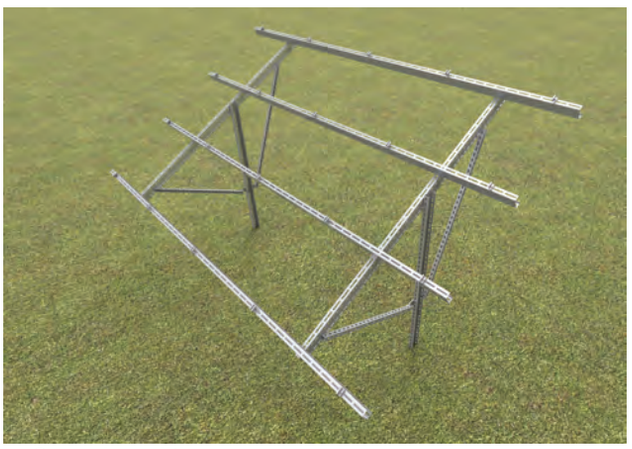
By using supporting structure where the panel frames are or in the middle of the panel length (in the case of panels divided in half), it is possible to take full advantage of the efficiency of bifacial modules.



Attention:
Please refer to the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

Detailed information on the products can be found on pages 59-110

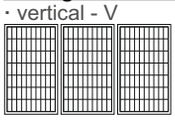
Freestanding mounting structure for the installation of photovoltaic panels
System: **W-V2G1-25°**



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

Technical description:
Materials of the support system:
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
Structure tested for strength.

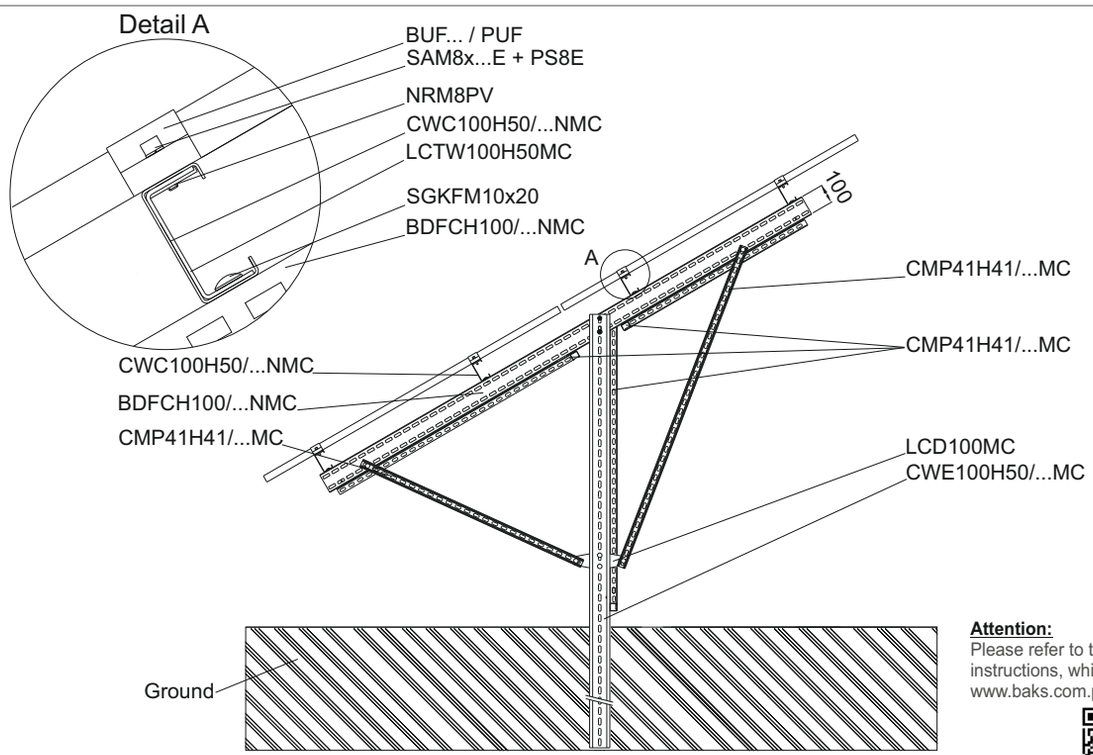
Arrangement of the modules:
· vertical - V



Ground conditions:
· soil with good/high load capacity

Structure 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 holes depends on the ground conditions)
· W-V2S1 structure - on request, a screw screwed into the ground for fixing of the support posts
· W-V2...1-WZ structure - east-west option

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.



Attention:
Please refer to the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

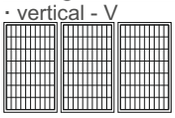
Detailed information on the products can be found on pages 59-110

Freestanding mounting structure for the installation of photovoltaic panels
System: **W-V3G2-25°**

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

Technical description
Materials of the support system:
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
Structure tested for strength.

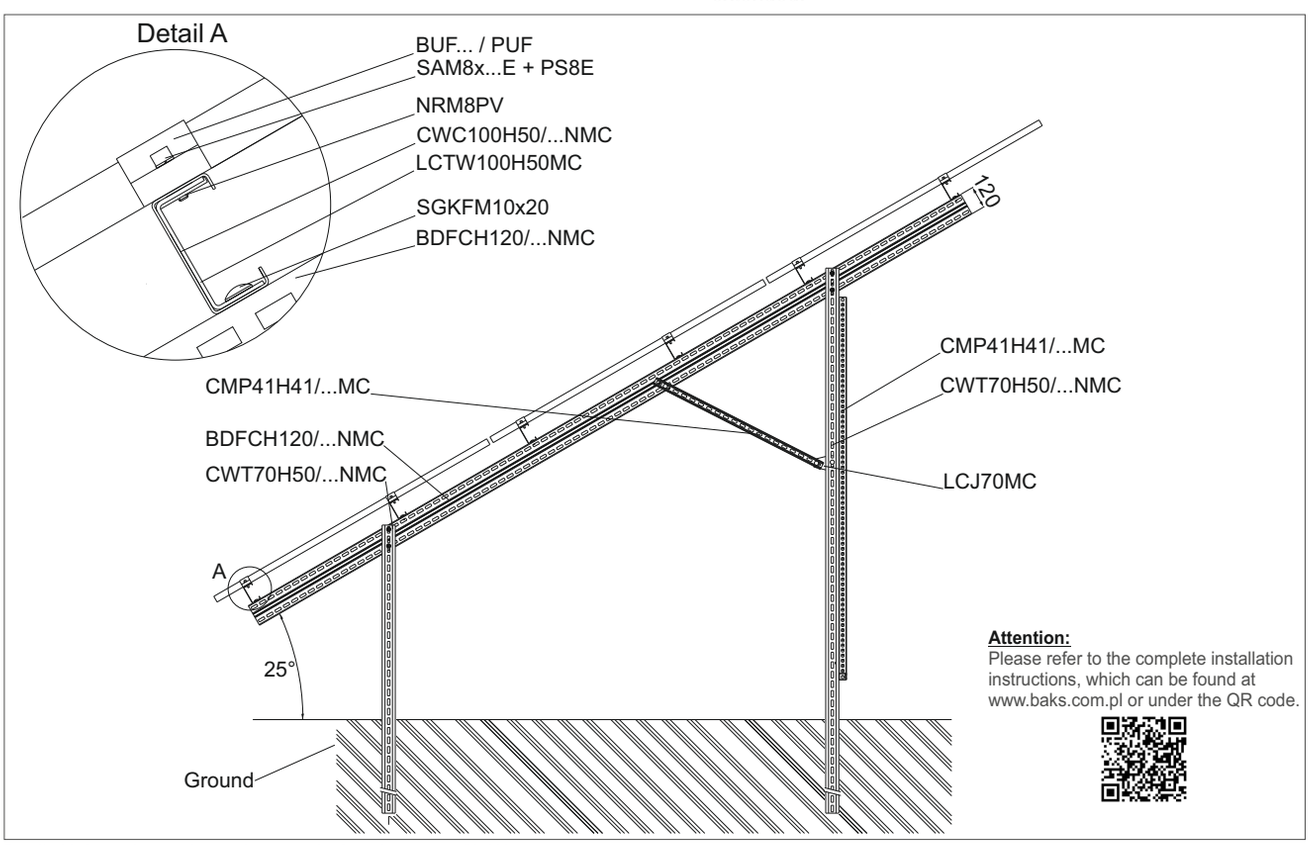
Arrangement of the modules:
· vertical - V



Ground conditions:
· soil with good/high load capacity

Structure 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 holes depends on the ground conditions)
· W-V3S2 structure - on request, a screw screwed into the ground for fixing of the support post
· W-V3...2-WZ structure - east-west option

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.



Attention:
Please refer to the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

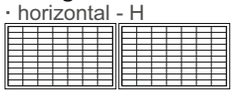
Detailed information on the products can be found on pages 59-110

Freestanding mounting structure for the installation of photovoltaic panels
System: **W-H5G2-25°**

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

Technical description:
Materials of the support system:
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
Structure tested for strength.

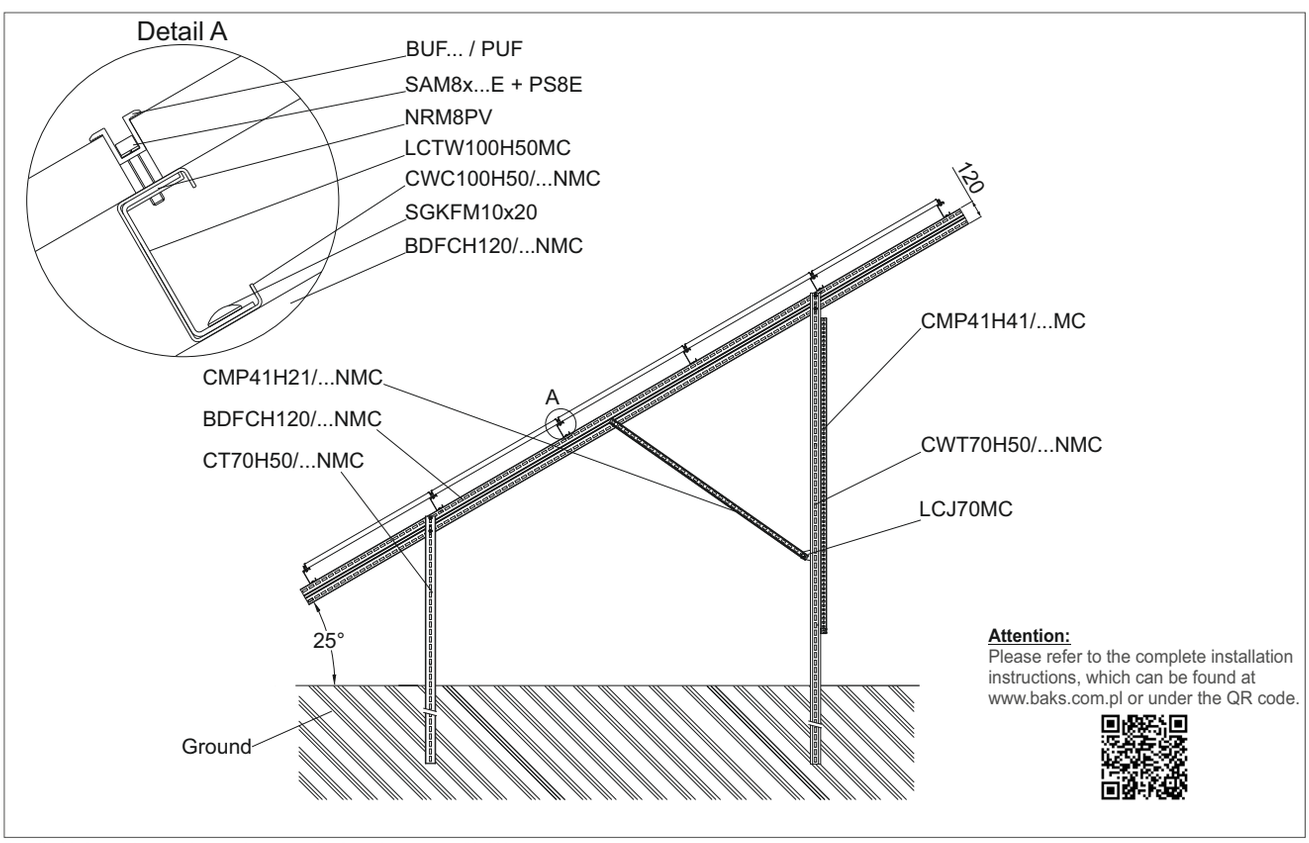
Arrangement of the modules:
· horizontal - H



Ground conditions:
· soil with good/high load capacity

Structure 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 holes depends on the ground conditions)
· W-H5S2 structure - on request, a screw screwed into the ground for fixing of the support posts
· W-H5...2-WZ structure - east-west option

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.



Attention:
Please refer to the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

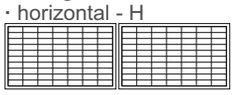
Detailed information on the products can be found on pages 59-110

Freestanding mounting structure for the installation of photovoltaic panels
System: **W-H6G2-25°**

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

Technical description:
Materials of the support system:
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
Structure tested for strength.

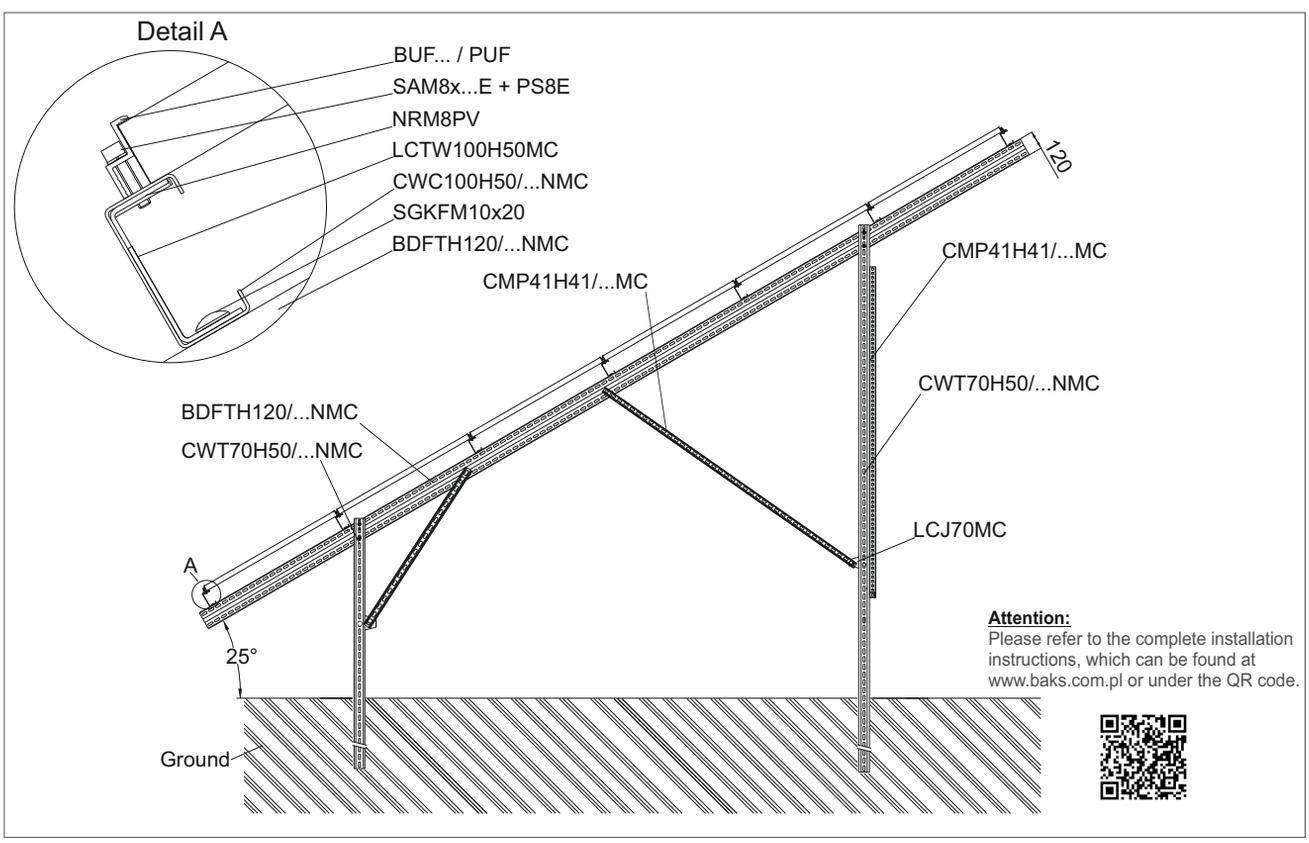
Arrangement of the modules:
· horizontal - H



Ground conditions:
· soil with good/high load capacity

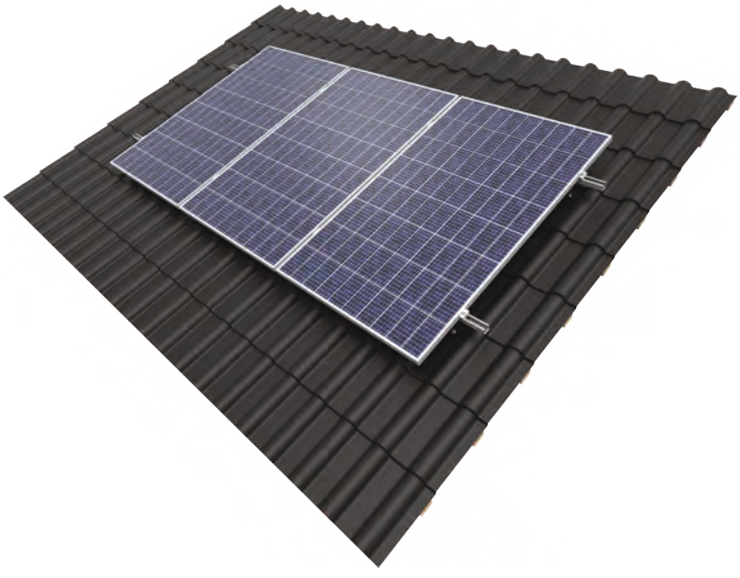
Structure assembly variants:
· W-H6G2 structure - rammed into the ground (anchorage depth depends on ground conditions)
· W-H6K2 structure - support posts anchored to the concrete foundation
· W-H6B2 structure - support posts poured with concrete min. B20 in the holes made in the ground (size of the holes depends on the ground conditions)
· W-H6S2 structure - on request, a screw screwed into the ground for fixing of the support posts
· W-H6...2-WZ structure - east-west option

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.



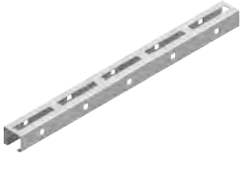
Detailed information on the products can be found on pages 59-110

Mounting structures for the installation of photovoltaic panels on sloping roofs



Structure systems for sloping roofs for different types of roof plating:
- metal tiles sheets or corrugated metal sheets, system: **DS-V1N, DS-H1N**
- sheet metal seam plates, system: **DS-V2N, DS-H2N**
- bituminous tiles, system: **DS-V3N, DS-H3N**
- ceramic tiles, system: **DS-V4N, DS-H4N**
- scale-shaped tiles, system: **DS-V5N, DS-H5N**
- trapezoidal metal sheets, system: **DS-V6aN, DS-H6aN, DS-V6bN, DS-H6bN, DS-V6cN, DS-H6cN**
- felt or membrane, system: **DS-V7N, DS-H7N**

Examples of system components:

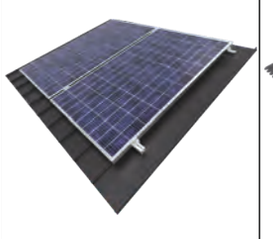
 **Aluminum Profile PAL30H32...**	 **Support Channel CWP40H35...MC**	 **Aluminum Profile PAL40H40...**	 **Aluminum Mounting Rail SMA40/... SM...**
 **Adjustable Roof Fixing DUR40E**	 **Adjustable Roof Fixing DUFR60E**	 **Adjustable Roof Fixing for Trapezoidal Sheet RUBTE**	 **Seam Roof Clamp UBZRE...**

Advantages of mounting structures for the installation of photovoltaic panels on sloping roofs

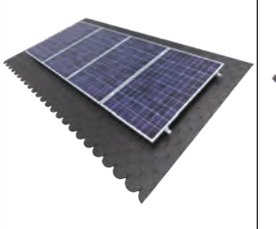
- variable adjustment and longitudinal profile perforation allows for trouble-free and quick installation of the structure even in case of unevenness on the roof
- specially profiled holders provide a stable and strong connection to the roof structure or plating
- all structure elements made of stainless steel are subjected to abrasive treatment, which guarantees an aesthetic appearance
- the structure elements are ready for use after taking them out of the packaging and do not require additional completion
- products made in Poland

Systems:

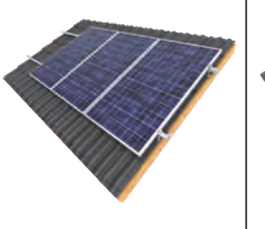
DS-V1N



DS-V2N

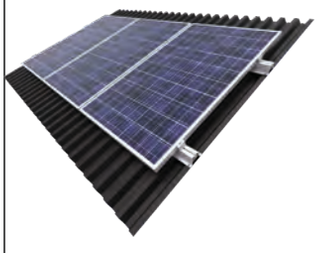


DS-V3N



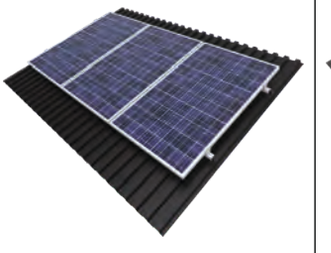
DS-V4N

DS-V5N

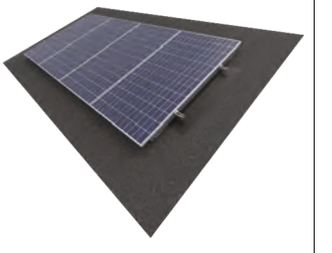


DS-V6aN

DS-V6bN



DS-V6cN



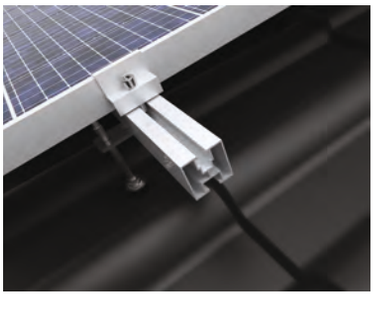
DS-V7N

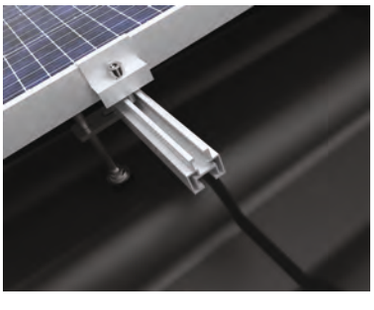
For inclined roofs
covered with:

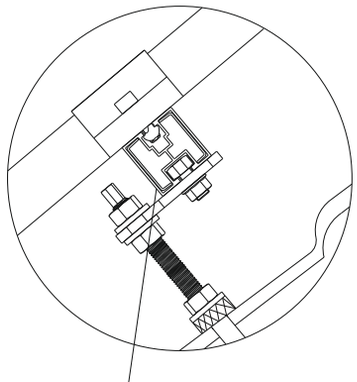
- ceramic and concrete tiles
- tile sheet
- plain tile
- interlocking metal sheets
- bituminous shingles
- roofing felt
- membrane

It is possible to use profiles interchangeably:
- PAL40H40/... (aluminum)
- PAL30H32/... (aluminum)*
 *limited to 1 wind zone and 1, 2 and 3 snow zones
- CWP40H35/...MC (coated steel: Magnelis®, MagiZinc®, PosMAC)

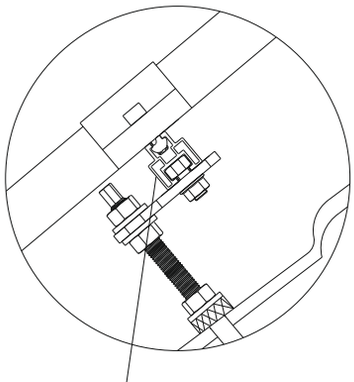
Example:



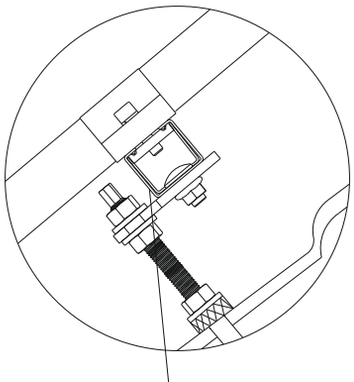




PAL40H40/...



PAL30H32/...



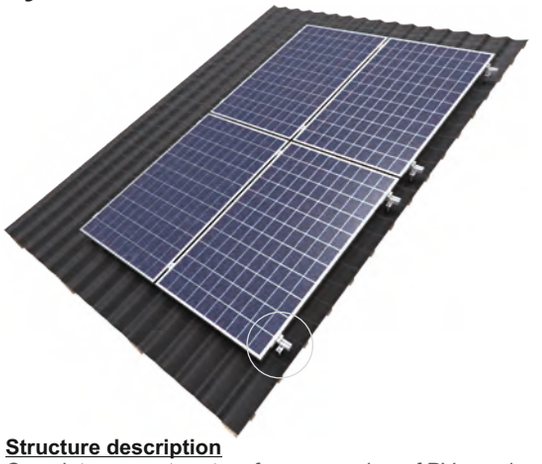
CWP40H35...MC

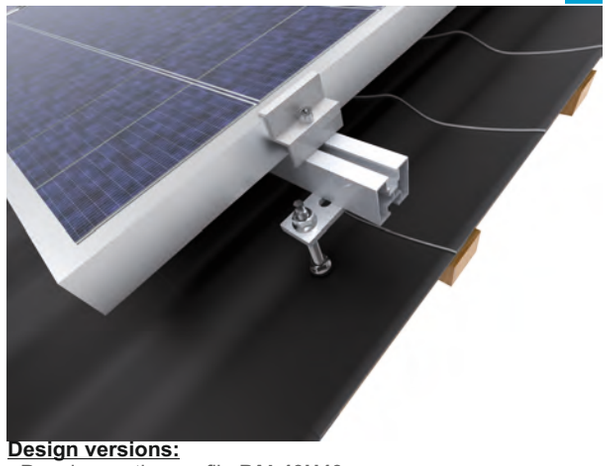
Mounting structure for the installation of photovoltaic panels

on sloping roofs covered with metal tiles sheets or corrugated metal sheets

System: **DS-V1N**

ST





Structure description

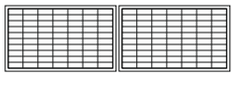
Complete support system for any number of PV panels in a vertical arrangement on a sloping roof covered with metal tiles sheets or corrugated metal sheets.

Technical description:

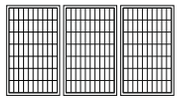
Materials of the support system:
A- Aluminium
E- Stainless steel
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
Structure tested for strength.
Installation of double-threaded screws for roof rafters.

Arrangement of the modules:

· horizontal - H



· vertical - V



Design versions:

- Panel mounting profile **PAL40H40**
- Panel mounting profile **PAL30H32**
- Panel mounting profile **CWP40H35MC**

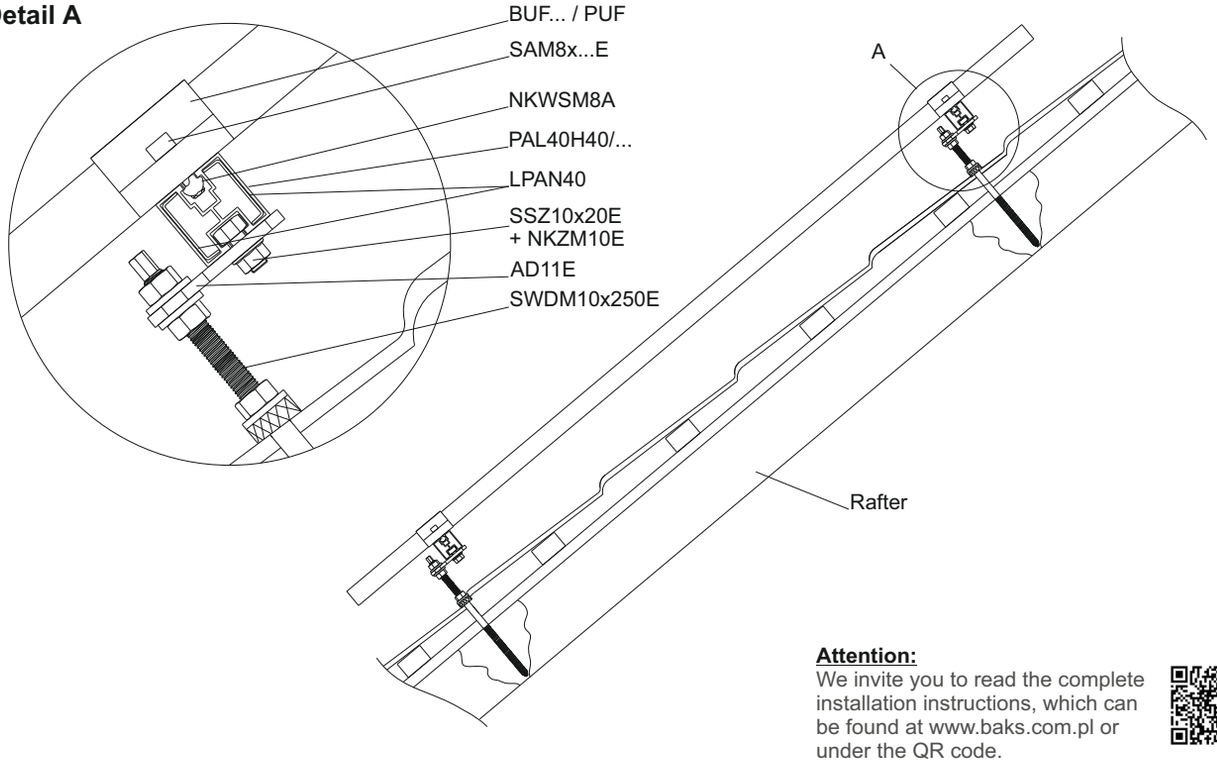
Advantages:

- wide range of height adjustment of aluminium profiles in relation to the roof thanks to the long, threaded part of the screw
- additional adjustment of the aluminium profiles thanks to the longitudinal hole in the AD...E adapter
- the elements are made of stainless steel and aluminium, which guarantees very high corrosion resistance
- high stability of the structure thanks to the aluminium profile with a specially profiled section
- double-threaded screws fitted with rubber to ensure basic sealing of the hole in the roof tiles

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.

Detail A



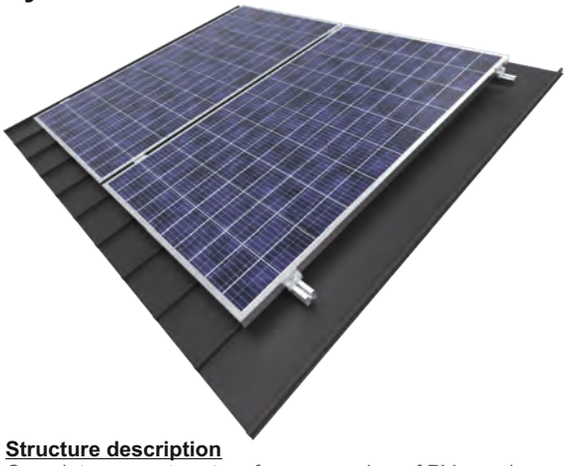
Attention:
We invite you to read the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

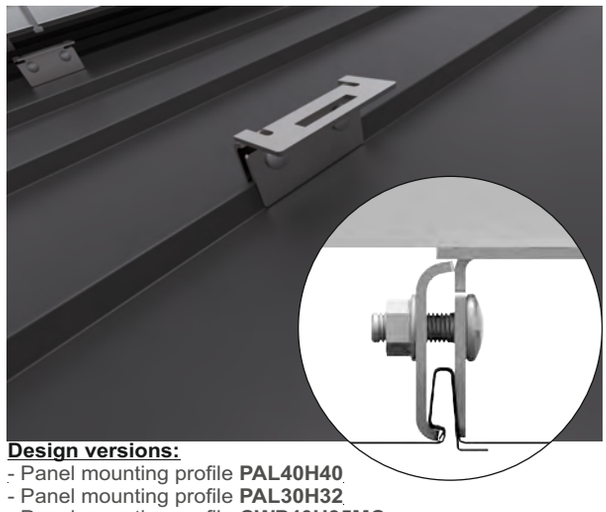
Detailed information on the products can be found on pages 59-110

Mounting structure for the installation of photovoltaic panels

on sloping roofs covered with sheet metal seam plates

System: DS-V2N





Structure description

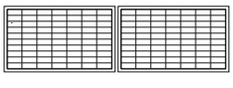
Complete support system for any number of PV panels in a vertical arrangement on a sloping roof covered with sheet metal seam plates.

Technical description:

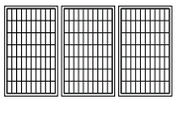
Materials of the support system:
A- Aluminium
E- Stainless steel
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
Structure tested for strength.
The holders should be mounted to the first three seams, counted from the edge of each row of panels and then every second seam.

Arrangement of the modules:

· horizontal - H



· vertical - V



Design versions:

- Panel mounting profile **PAL40H40**
- Panel mounting profile **PAL30H32**
- Panel mounting profile **CWP40H35MC**

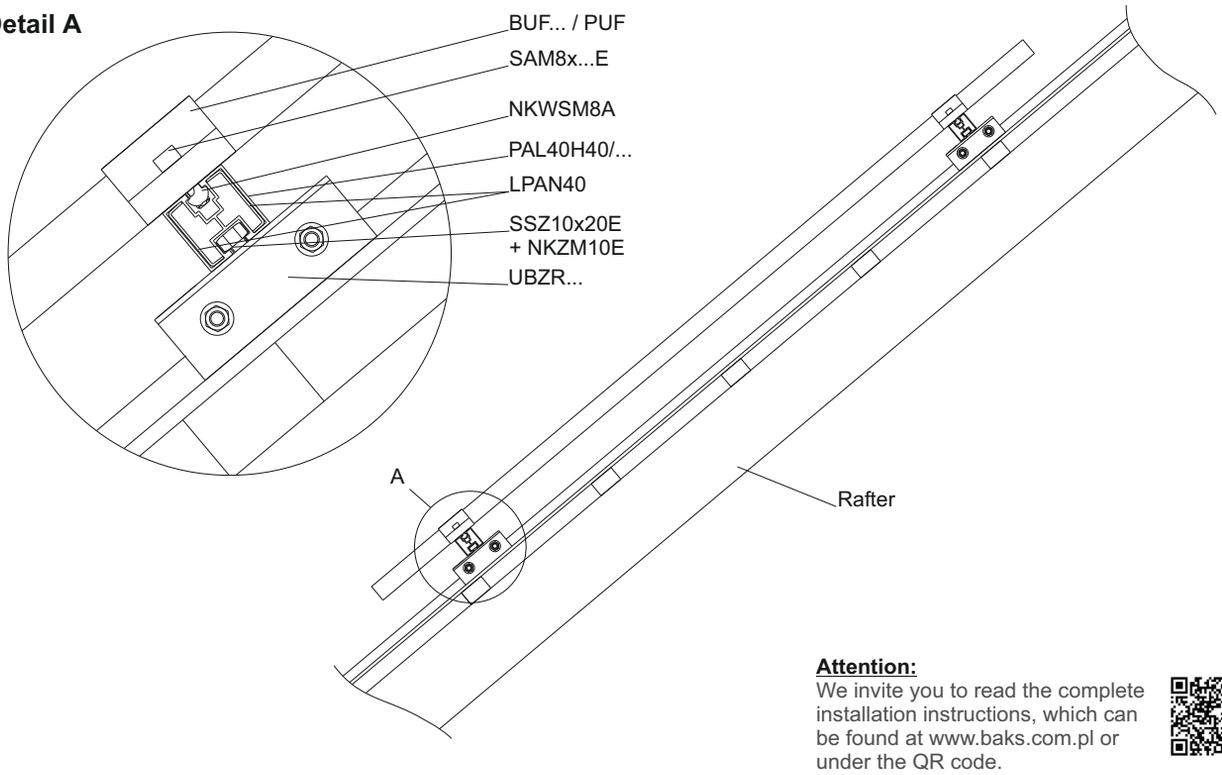
Advantages:

- installation of the structure to the seam without interfering with the structure of the roofing
- quick installation of the holders without the need to locate the rafters
- different versions of holders for sheets metal to ensure stable installation with most sheet metal seam plates systems
- the elements are made of stainless steel and aluminium, which guarantees very high corrosion resistance
- high stability of the structure thanks to the aluminium profile with a specially profiled section

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.

Detail A



Attention:

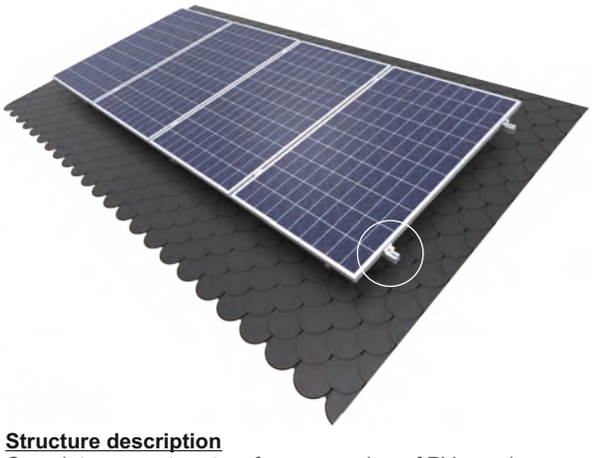
We invite you to read the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

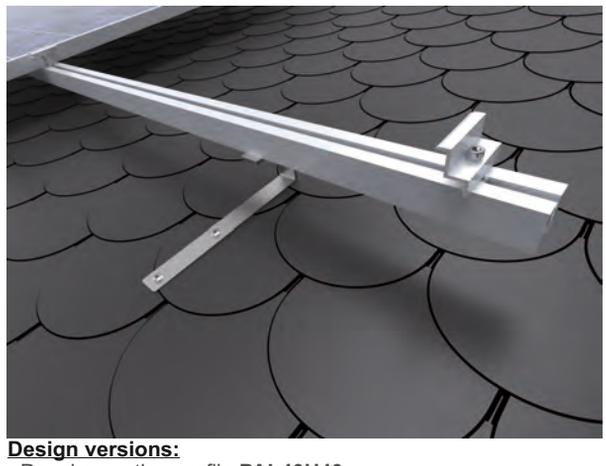
Detailed information on the products can be found on pages 59-110

Mounting structure for the installation of photovoltaic panels

on sloping roofs covered with bituminous tiles

System: **DS-V3N**





Structure description

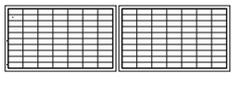
Complete support system for any number of PV panels in a vertical arrangement on a sloping roof covered with bituminous tiles

Technical description:

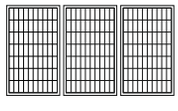
Materials of the support system:
A- Aluminium
E- Stainless steel
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
Structure tested for strength.
Installation of holders with screws for roof rafters.

Arrangement of the modules:

· horizontal - H



· vertical - V



Design versions:

- Panel mounting profile **PAL40H40**
- Panel mounting profile **PAL30H32**
- Panel mounting profile **CWP40H35MC**

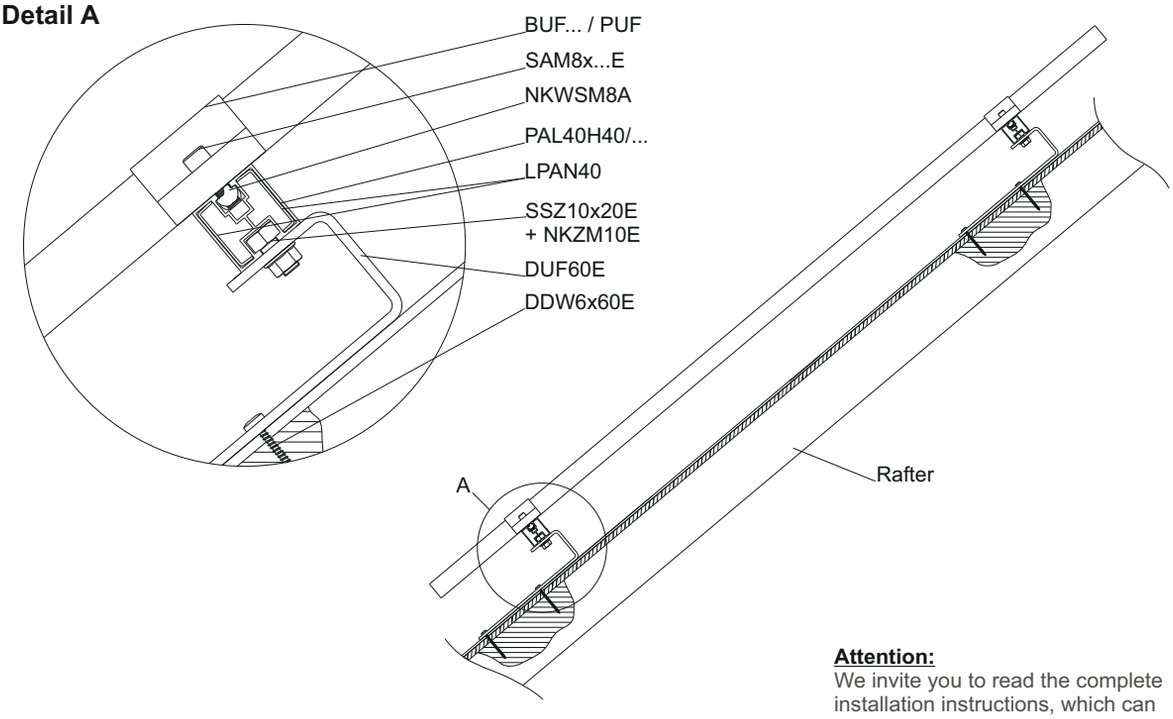
Advantages:

- the shape of the holders ensures high stability of the structure
- the elements are made of stainless steel and aluminium, which guarantees very high corrosion resistance
- high stability of the structure thanks to the aluminium profile with a specially profiled section

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.

Detail A



Attention:

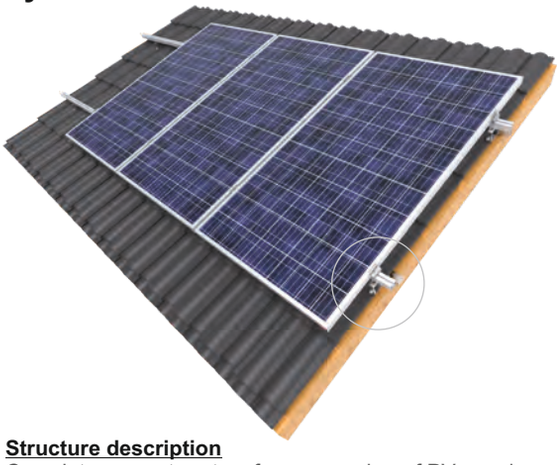
We invite you to read the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

Detailed information on the products can be found on pages 59-110

Mounting structure for the installation of photovoltaic panels

on sloping roofs covered with bituminous tiles

System: **DS-V4N**



Structure description

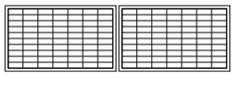
Complete support system for any number of PV panels in a vertical arrangement on a sloping roof covered with ceramic or concrete tiles.

Technical description:

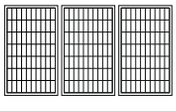
Materials of the support system:
A- Aluminium
E- Stainless steel
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
Structure tested for strength.
Installation of holders with screws for roof rafters.

Arrangement of the modules:

· horizontal - H



· vertical - V



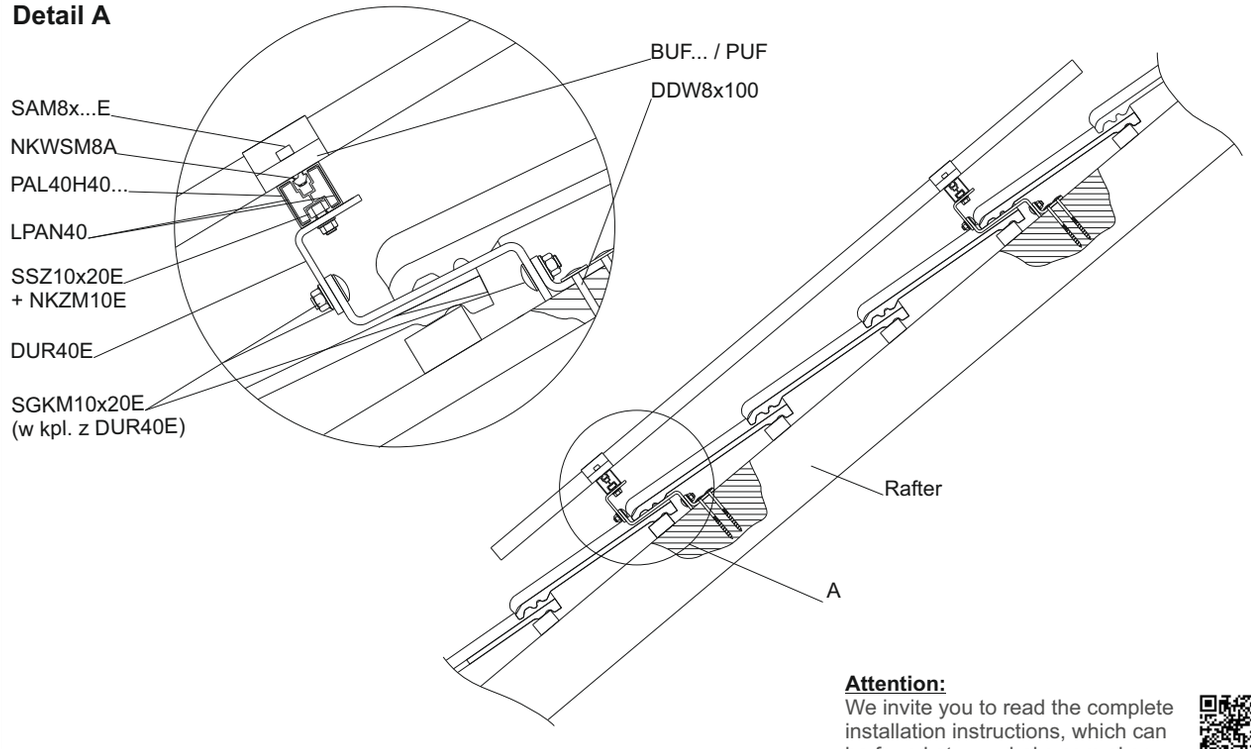
Advantages:

- wide adjustment range of the holders thanks to longitudinal holes in each of the 3 elements of the holder
- dense perforation in the part directly adjacent to the roof truss ensure that the holder can be adjusted and correctly positioned in relation to the tiles so that the hook is in the middle of the tile mounted below
- elongated middle arm of the holder allows the hooks to be mounted on the majority of ceramic and concrete roof tiles available on the market
- the elements are made of stainless steel and aluminium, which guarantees very high corrosion resistance
- high stability of the structure thanks to the aluminium profile with a specially profiled section

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.

Detail A



Attention:

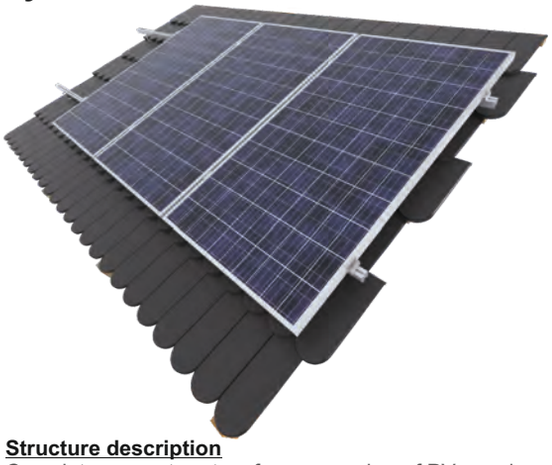
We invite you to read the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

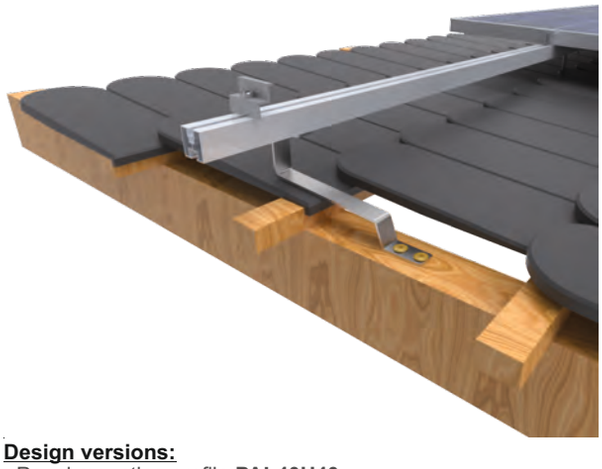
Detailed information on the products can be found on pages 59-110

Mounting structure for the installation of photovoltaic panels

on sloping roofs covered with scale-shaped tiles

System: **DS-V5N**





Structure description

Complete support system for any number of PV panels in a vertical arrangement on a sloping roof covered with scale-shaped tiles

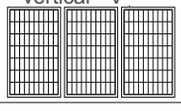
Technical description:

Materials of the support system:
A- Aluminium
E- Stainless steel
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
Structure tested for strength.
Installation of holders with screws for roof rafters.
Recommended spacing between holders 0,8 - 1 m.

Arrangement of the modules:

· horizontal - H

· vertical - V



Design versions:

- Panel mounting profile **PAL40H40**
- Panel mounting profile **PAL30H32**
- Panel mounting profile **CWP40H35MC**

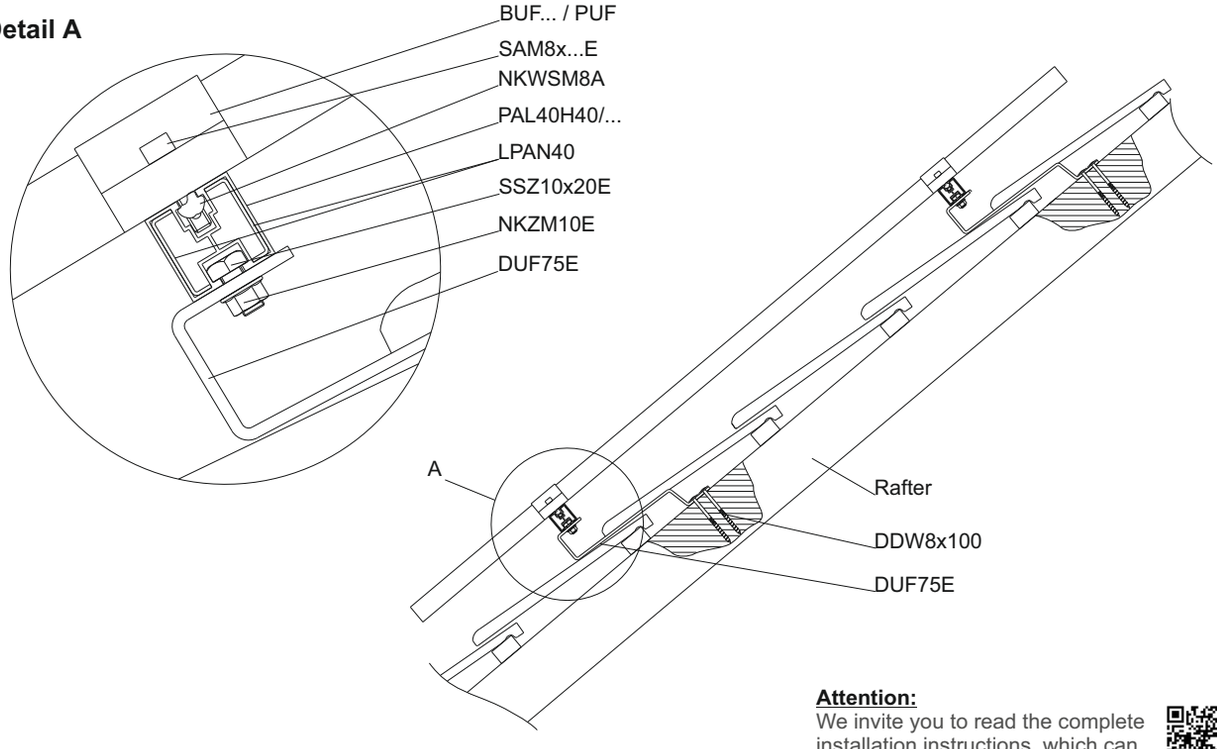
Advantages:

- elongated arm of the holder allows the hooks to be mounted on the majority of ceramic and concrete roof tiles available on the market
- the elements are made of stainless steel and aluminium, which guarantees very high corrosion resistance
- high stability of the structure thanks to the aluminium profile with a specially profiled section

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.

Detail A



Attention:

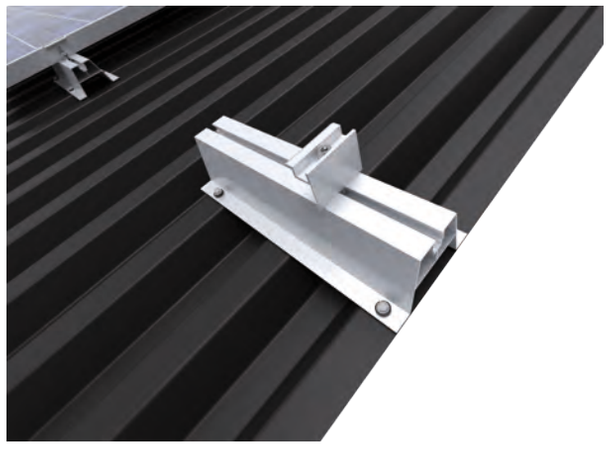
We invite you to read the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

Detailed information on the products can be found on pages 59-110

Mounting structure for the installation of photovoltaic panels

on sloping roofs covered with trapezoidal metal sheets - high rail

System: **DS-V6aN**



Structure description

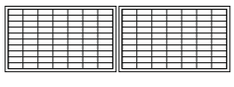
Complete support system for any number of PV panels in a vertical arrangement on a sloping roof covered with trapezoidal metal sheets.

Technical description:

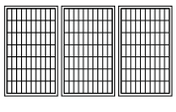
Materials of the support system:
A- Aluminium
E- Stainless steel
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
Structure tested for strength.

Arrangement of the modules:

· horizontal - H



· vertical - V



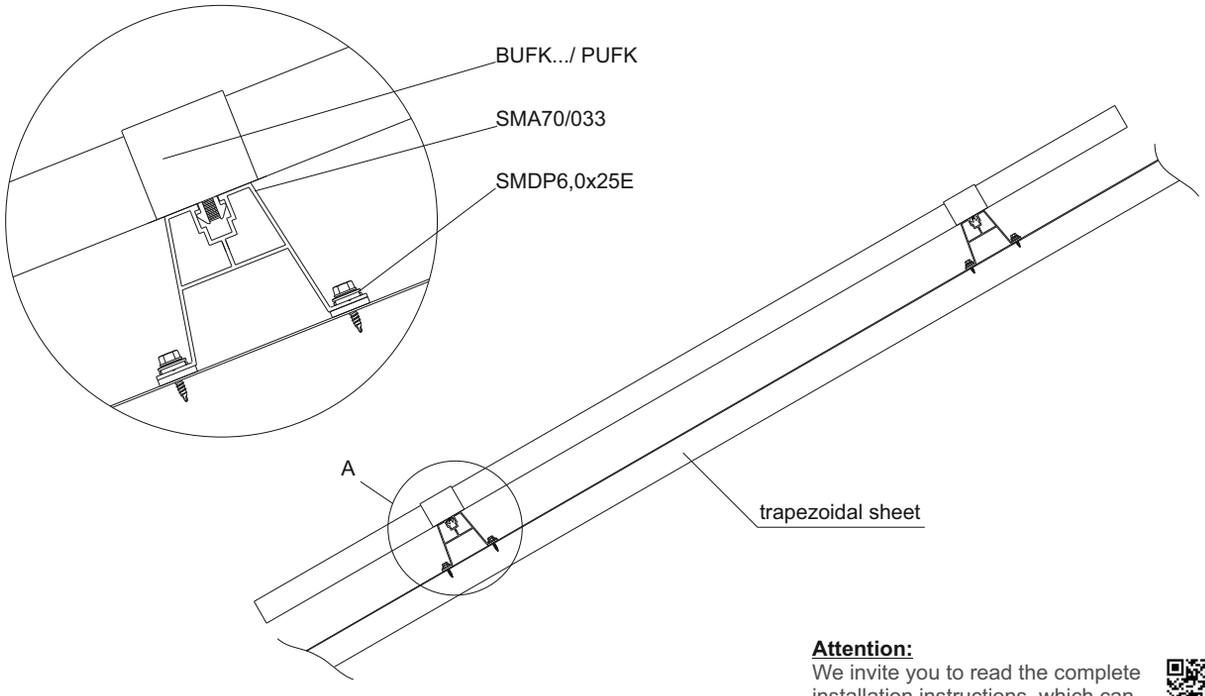
Advantages:

- quick installation of the structure with threaded screws directly to the trapezoidal metal sheets without the need to locate the rafters
- very economical design with a small number of components
- the elements are made of stainless steel and aluminium, which guarantees very high corrosion resistance
- high stability of the structure thanks to the aluminium profile with a specially profiled section

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.

Detail A



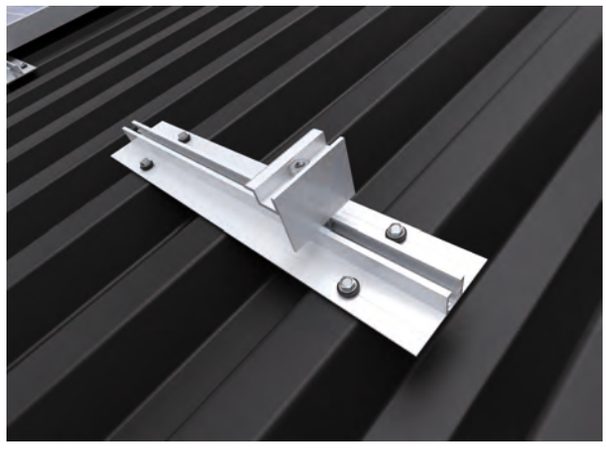
Attention:
We invite you to read the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

Detailed information on the products can be found on pages 59-110

Mounting structure for the installation of photovoltaic panels

on sloping roofs covered with trapezoidal metal sheets - low rail

System: **DS-V6bN**



Structure description

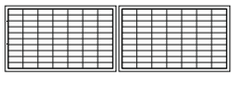
Complete support system for any number of PV panels in a vertical arrangement on a sloping roof covered with trapezoidal metal sheets.

Technical description:

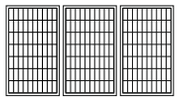
Materials of the support system:
A- Aluminium
E- Stainless steel
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
Structure tested for strength.

Arrangement of the modules:

· horizontal - H



· vertical - V



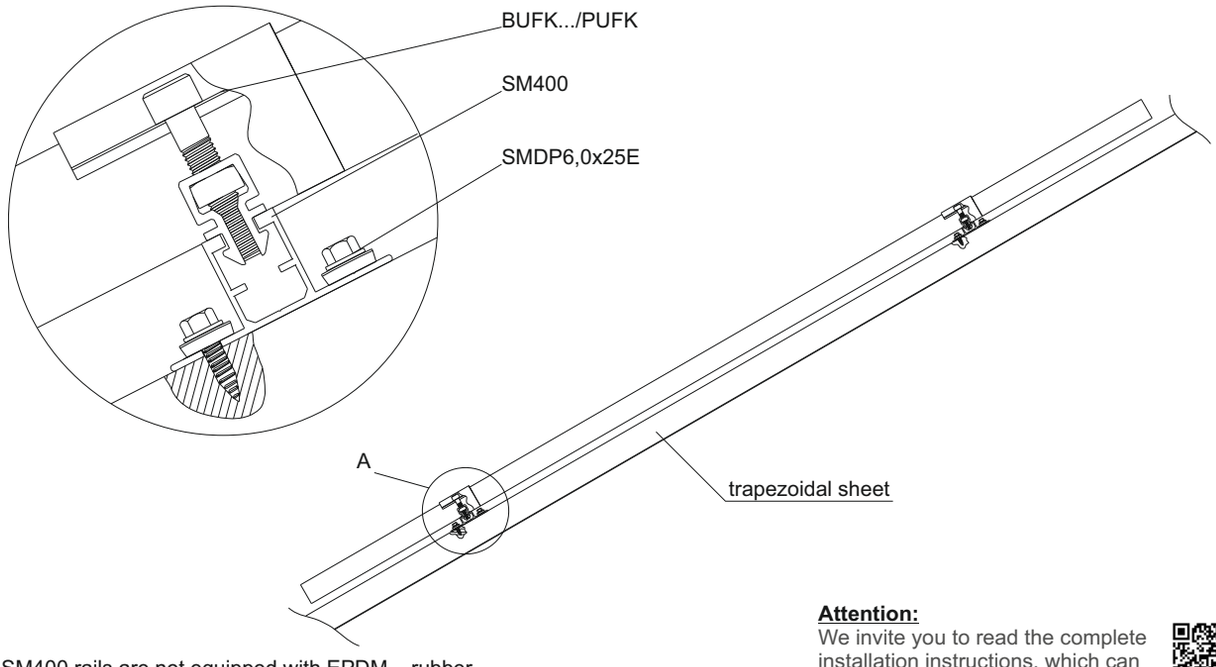
Advantages:

- quick installation of the structure with threaded screws directly to the trapezoidal metal sheets without the need to locate the rafters
- very economical design with a small number of components
- the elements are made of stainless steel and aluminium, which guarantees very high corrosion resistance
- high stability of the structure thanks to the aluminium profile with a specially profiled section

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.

Detail A



- SM400 rails are not equipped with EPDM... rubber. For the assembly EPDMW2x40 rubber is recommended.

Attention:

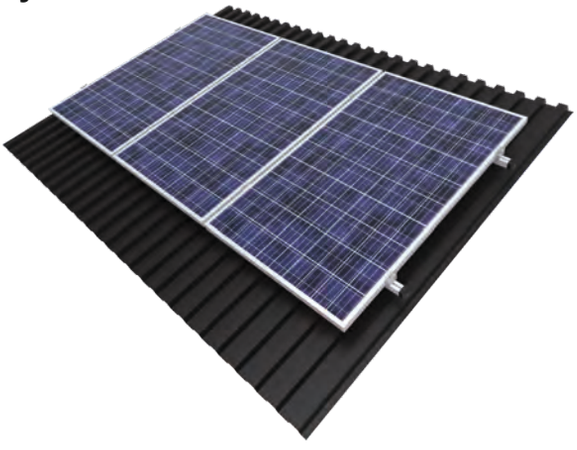
We invite you to read the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

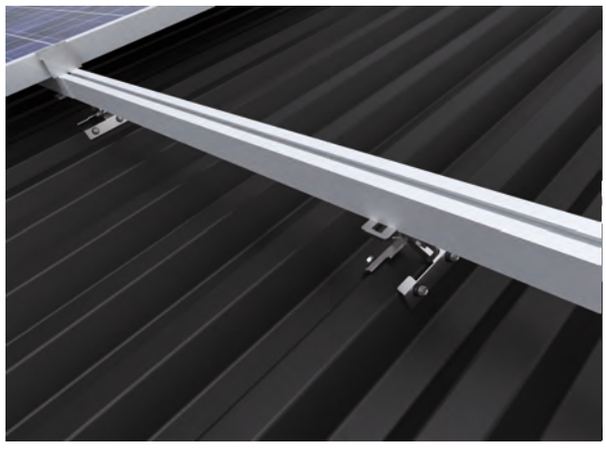
Detailed information on the products can be found on pages 59-110

Mounting structure for the installation of photovoltaic panels

on sloping roofs covered with trapezoidal metal sheets

System: **DS-V6cN**





Structure description

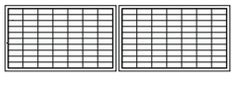
Complete support system for any number of PV panels in a vertical arrangement on a sloping roof covered with trapezoidal metal sheets.

Technical description:

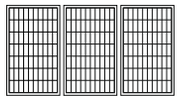
Materials of the support system:
A- Aluminium
E- Stainless steel
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
Structure tested for strength.

Arrangement of the modules:

· horizontal - H



· vertical - V



Design versions:

- Panel mounting profile **PAL40H40**
- Panel mounting profile **PAL30H32**
- Panel mounting profile **CWP40H35MC**

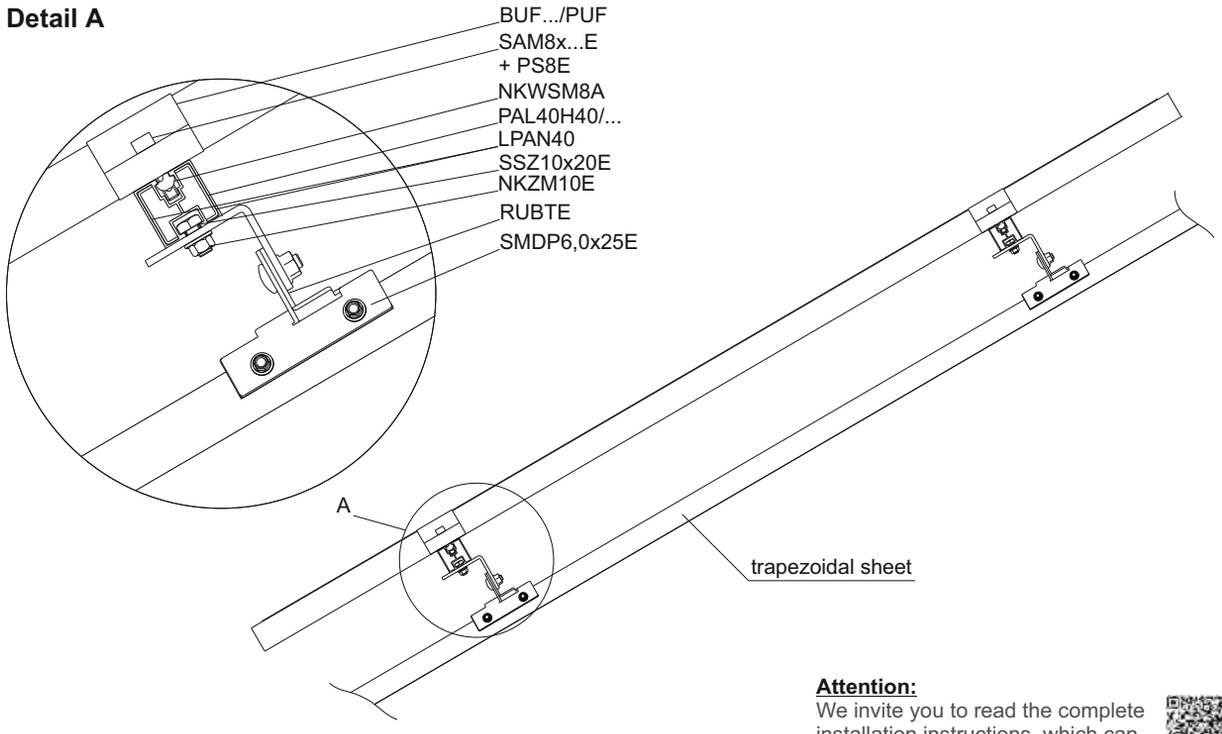
Advantages:

- quick installation of the structure with threaded screws directly to the trapezoidal metal sheets without the need to locate the rafters
- very economical design with a small number of components
- the elements are made of stainless steel and aluminium, which guarantees very high corrosion resistance
- high stability of the structure thanks to the aluminium profile with a specially profiled section
- holder suitable for different types of trapezoidal metal sheets

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.

Detail A



Attention:

We invite you to read the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

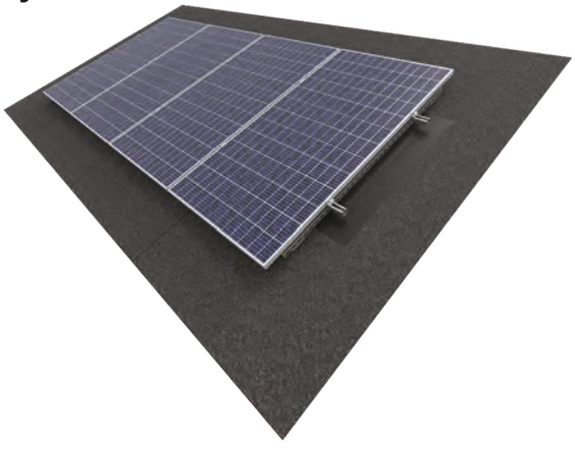
Detailed information on the products can be found on pages 59-110

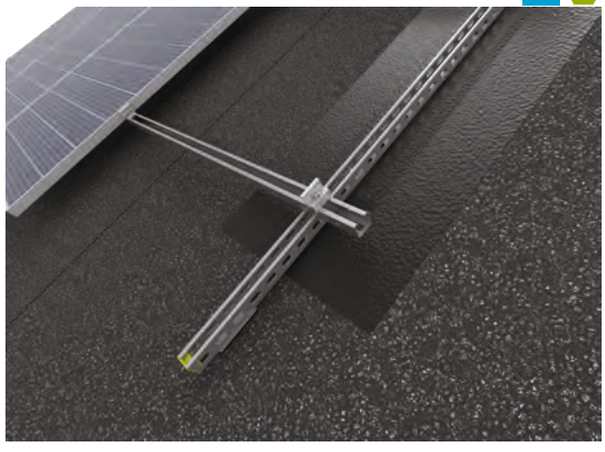
Mounting structure for the installation of photovoltaic panels

on a inclined roof covered with roofing felt or membrane

System: **DS-V7N**

ST N





Structure description

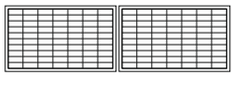
A complete support system that allows the fixing of any number of PV panels in a vertical arrangement on a inclined roof covered with roofing felt and membrane.

Technical description:

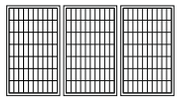
Materials of the support system:
A- Aluminium
E- Stainless steel
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
Structure tested for strength.

Arrangement of the modules:

· horizontal - H



· vertical - V

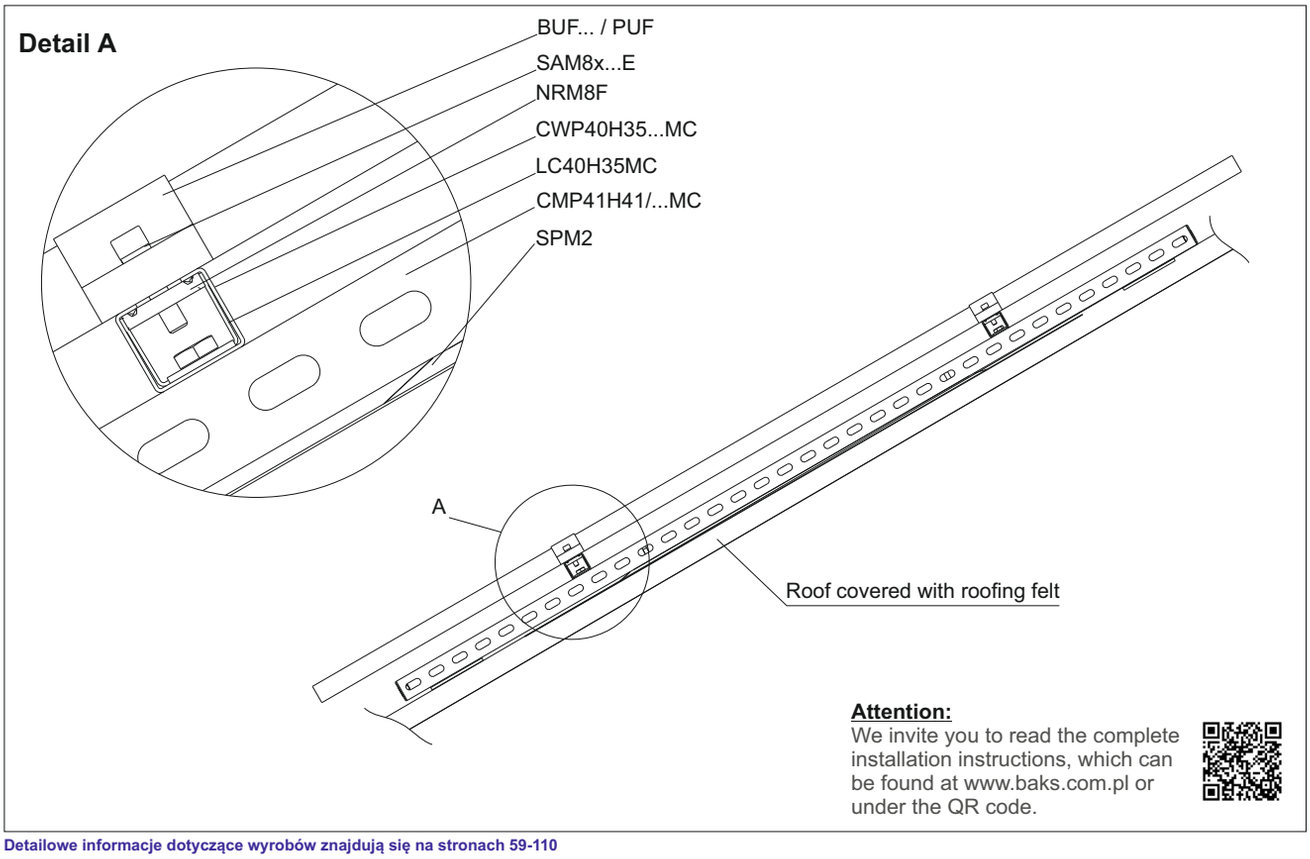


Advantages:

- quick installation and low price
- strength-tested construction
- made of sheet metal with coating: Magnelis®, MagiZinc®, PosMAC
- smooth adjustment of profile spacing
- no interference with roof sheathing
- very economical design with a small number of components
- very high corrosion resistance

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.



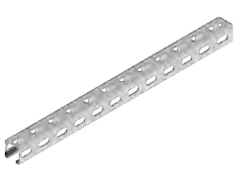
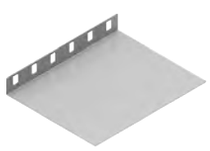
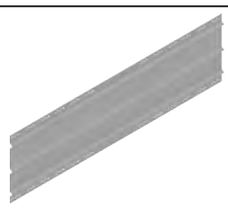
Attention:
We invite you to read the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

Detailowe informacje dotyczące wyrobów znajdują się na stronach 59-110

Mounting structures for the installation of photovoltaic panels on flat roofs, building elevations and balcony railings

Structure systems for flat roofs, building elevations and balcony railings:
- flat roofs, system: **DP-DNHBE, DP-DNHKE, DP-DNHWE, DP-DNHKSE**
- flat roofs, system: **DP-DNHBE-WZ, DP-DNHKE-WZ, DP-DNHWE-WZ, DP-DNHKSE-WZ**
- flat roofs, system: **DP-DTHBN, DP-DTHKN, DP-DTHWN, DP-DTHKSN**
- flat roofs, system: **DP-DTHBN-WZ, DP-DTHKN-WZ, DP-DTHWN-WZ, DP-DTHKSN-WZ**
- flat roofs, system: **DP-DTVKN, DP-DTVBN**
- flat roofs, system: **DP-DTAVKN, DP-DTAVBN**
- building elevations, system: **E-VKRN, E-VKTN, E-HKRN**
- balcony railings, system: **B-VPN, B-HPN**

Examples of system components:

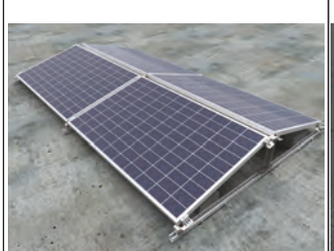
 **Steel Fixing Plate for Flat Roofs SPM1**	 **Panel's Bottom Holder UPDCNMC**	 **Panel's Top Holder UPGC...NMC**	 **Upper base east-west PGWZMC**
 **Mounting Channel CMP41H41...MC**	 **Base Plate PDOP300MC**	 **Universal wind shield with adjustable length OWN...MC**	 **Channel base with vibro-insulating rubber PCSBV**

Advantages of the structures for mounting photovoltaic panels on flat roofs, building elevations and balcony railings

- structures available in steel in Magnelis® coating and aluminium
- universal structures for flat roofs that can be fixed directly to the roofing with: anchors, boards glued to the membrane or the roofing felt, or used as ballast structures
- variable adjustment and longitudinal perforation of the structure components allows for trouble-free and quick installation of the structure even in case of unevenness on the roof
- perforation in the wind shields allows for easy and quick installation even after the photovoltaic panels have been installed
- universal wind shields allow for quick installation and there is no need to order shields with dimensions dedicated to a given panel
- specially designed profile of the wind shields ensures stable adhesion to the structure, and after using additional pressure plates, even strong wind does not cause vibration
- the dimensions of the wind shields are adapted to various types of panels, thanks to which their installation does not require drilling
- triangular structures made of channels allow the panels to be mounted to steel profiles in the Magnelis® coating and to aluminium profiles
- products made in Poland!

Systems:

DP-DNH...E



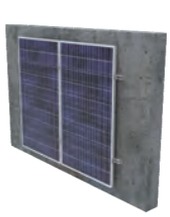
DP-DNH...E-WZ

DP-DTH...N

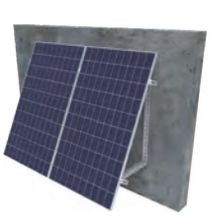
DP-DTH...N-WZ

DP-DTAV...N

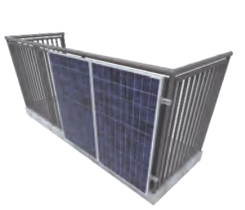
DP-DTV...N



E-VKRN



E-VKTN

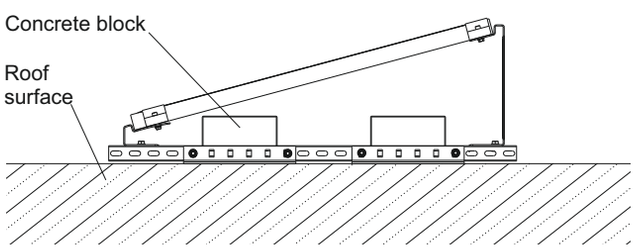


B-VPN

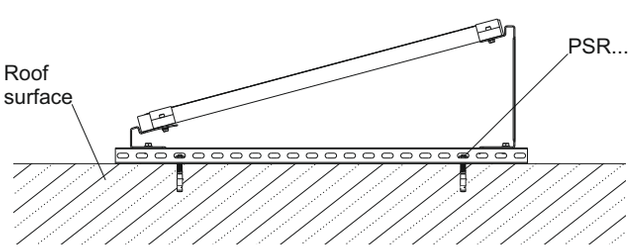
Recommended ways of mounting flat structures

Structure mounting variants:

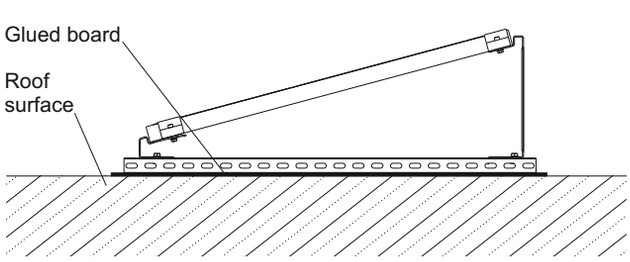
DP-DNHBE
Structure mounted on a flat roof without interference with the roofing by means of additional ballast such as e.g. concrete blocks. Steel elements of the structure are separated from the roofing by thick vibration damping rubber.



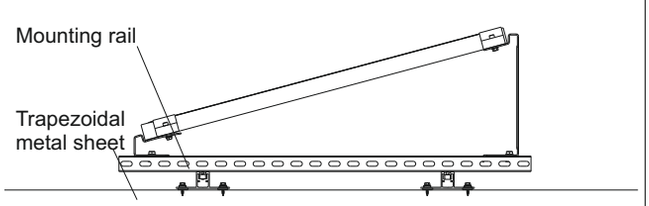
DP-DNHKE
Structure mounted on a flat roof using mechanical or chemical anchors. Used on flat roofs that allow interference. Can be used on roofs with low load-bearing capacity due to elimination of ballasting. Steel elements of the structure are separated from the roofing by thick vibration damping rubber.



DP-DNHWE
The structure is mounted on a flat roof using innovative bases glued into the roofing made of bituminous felt or membrane. Thanks to the very high strength of glued-in bases, the structure does not require ballasting and anchoring, thanks to which it can be used on roofs with low bearing capacity without interference in the roofing.



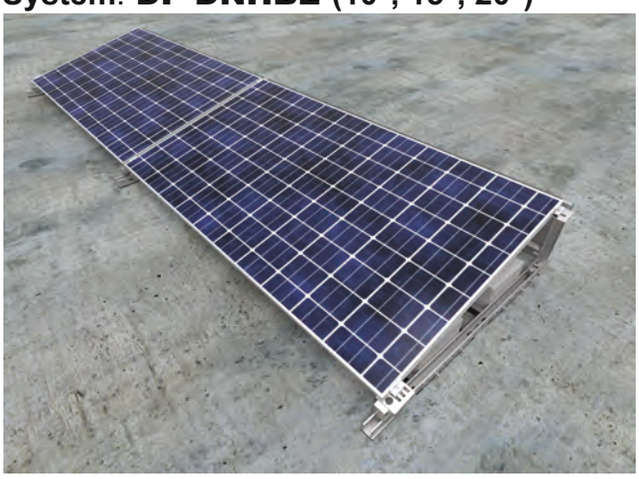
DP-DNHKSE
The structure is mounted on a flat roof covered with trapezoidal metal sheets or sandwich panels by means of long sections of aluminium mounting rails SM... Such a method of mounting facilitates the installation of the structure to the above mentioned roofings.

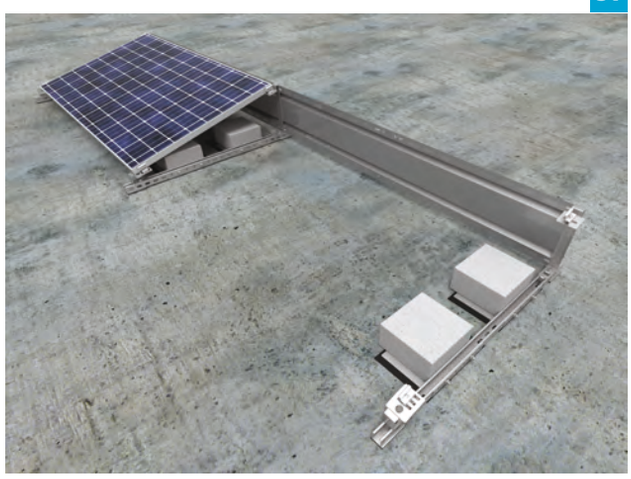


Mounting structure for the installation of photovoltaic panels
on flat roofs

System: **DP-DNHBE (10°, 15°, 20°)**

ST





Structure description
Complete support system for fixing the panels horizontally at angles of 10°, 15° and 20° on a flat roof. The **DP-DNHBE system** enables the panels to be installed without disturbing the roofing thanks to the ballasting of the structure with concrete blocks (protect the blocks from soaking in rainwater).

Technical description:
Materials of the support system:
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
Structure tested for strength.

Structure assembly variants:
• anchored to the roof
• ballast (after using vibration damping pads and ballast bases)
• glued
• aluminum mounting rail

Advantages:
- quick installation and low price
- structure tested for strength
- steel in Magnelis® coating guarantees very high corrosion resistance
- fixing the panel holders to the main profile with one screw and channel nut
- variable adjustment of the spacing of holders in the main profile
- longitudinal holes for panel mounting in the UPDC...MC and UPGC...MC holders extend the tolerances for mounting of the panels to the structure mounted on the roof
- bottom holder for setting three angles: 10°, 15° and 20°
- possibility of mounting panels with any length

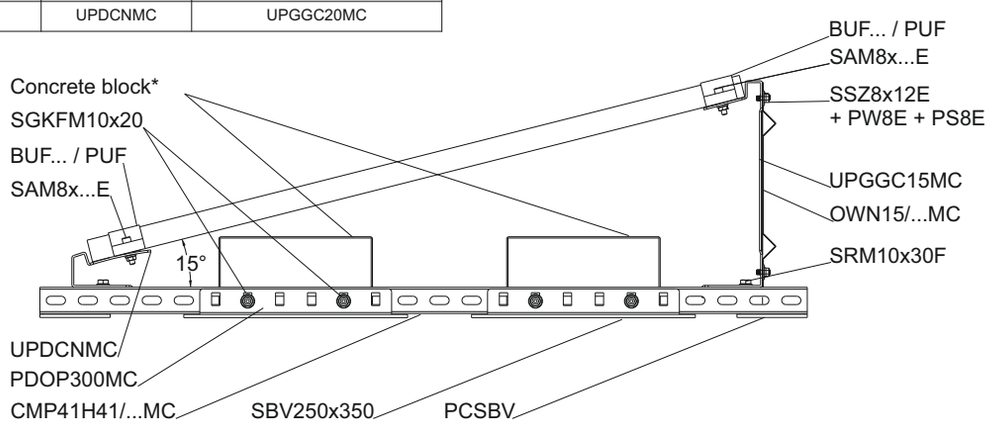
Warranty
BAKS provides a 10 year warranty period for the components included in the support structure - only if all conditions of the manufacturer's warranty are met.

The table below allows you to select a set of holders (bottom + top) in order to obtain a structure with an appropriate angle of inclination of the panels.

inclination angle of the panels	panel's bottom holder	panel's top holder
10°	UPDCNMC	UPGGC10MC
15°	UPDCNMC	UPGGC15MC
20°	UPDCNMC	UPGGC20MC

Maximum modules dimensions:
· 1150x2100 mm

Arrangement of the modules:
· horizontal - H



The ballast value can be as high as about 100kg/panel. The size of the ballast in each case must be determined by a certified constructor.

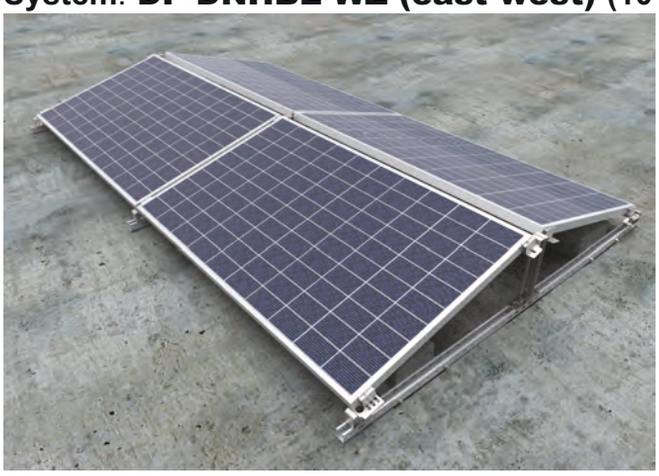
Attention:
Please refer to the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

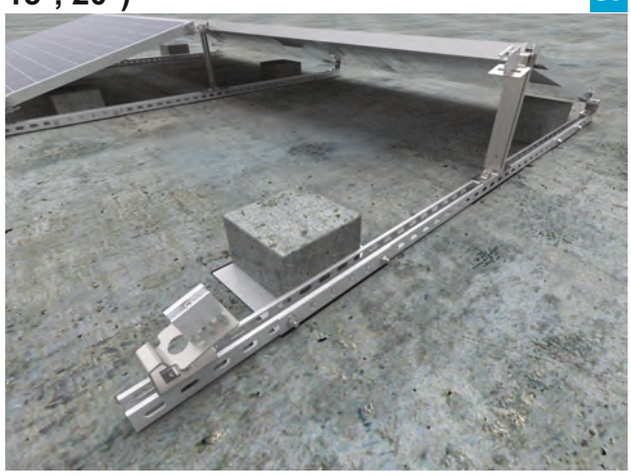
Detailed information on the products can be found on pages 59-110

Mounting structure for the installation of photovoltaic panels
on flat roofs

System: **DP-DNHBE-WZ (east-west)** (10°, 15°, 20°)

ST





Structure description
Complete support system for fixing the panels horizontally at angles of 10°,15° and 20° on a flat roof. The DP-DNHBE (W-Z) system enables the panels to be installed without disturbing the roofing thanks to the ballasting of the structure with concrete blocks (protect the blocks from soaking in rainwater)

Oechnical description:
Materials of the support system:
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
Structure tested for strength.

Structure assembly variants:
• anchored to the roof
• ballast (after using vibration damping pads and ballast bases)
• glued
• aluminum mounting rail

Advantages:
- quick installation and low price
- structure tested for strength
- steel in Magnelis® coating guarantees very high corrosion resistance
- fixing the panel holders to the main profile with one screw and channel nut
- variable adjustment of the spacing of holders in the main profile
- longitudinal holes for panel mounting in the UPDC...MC and UPGC...MC holders extend the tolerances for mounting of the panels to the structure mounted on the roof
- bottom holder for setting three angles: 10°, 15° and 20°
- possibility of mounting panels with any length

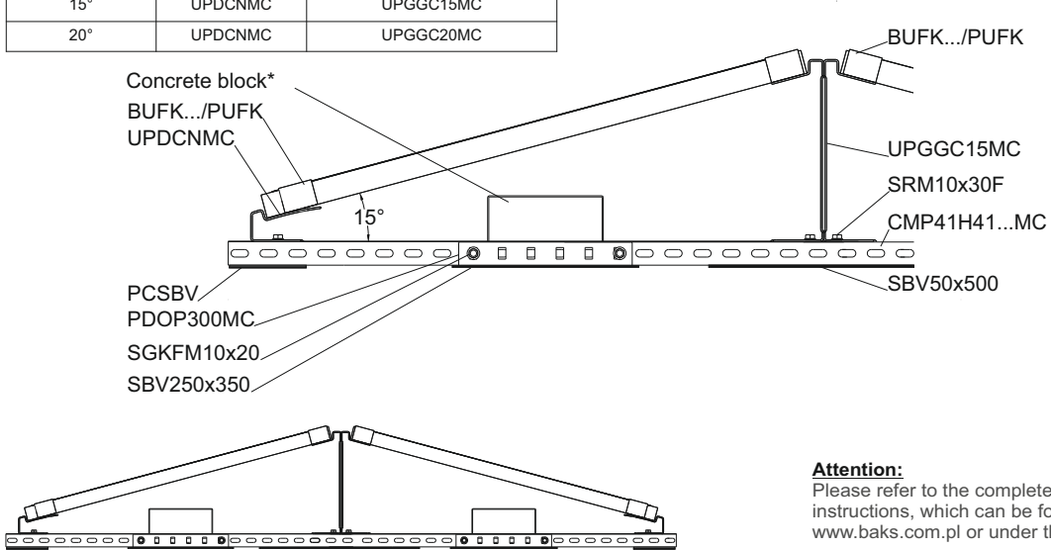
Warranty
BAKS provides a 10 year warranty period for the components included in the support structure - only if all conditions of the manufacturer's warranty are met.

The table below allows you to select a set of holders (bottom + top) in order to obtain a structure with an appropriate angle of inclination of the panels.

inclination angle of the panels	panel's bottom holder	panel's top holder
10°	UPDCNMC	UPGGC10MC
15°	UPDCNMC	UPGGC15MC
20°	UPDCNMC	UPGGC20MC

Maximum modules dimensions:
· 1150x2100 mm

Arrangement of the modules:
· horizontal - H



Attention:
Please refer to the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

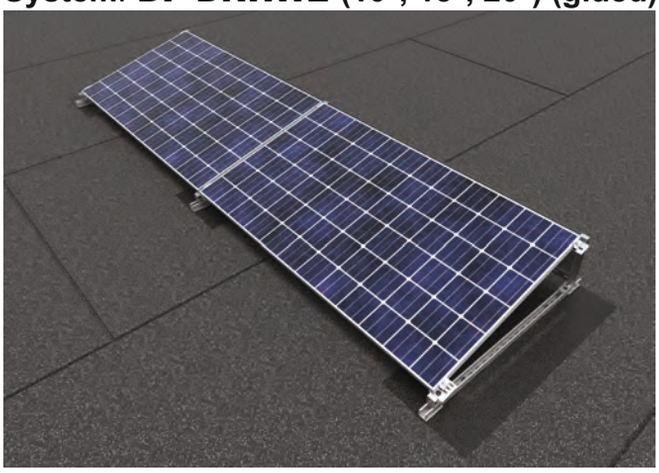
Detailed information on the products can be found on pages 59-110

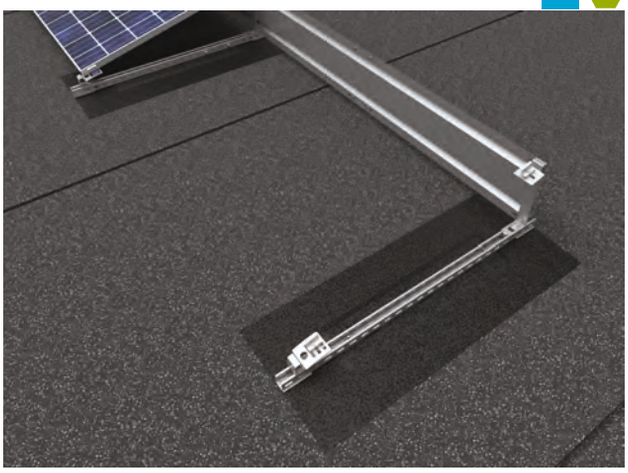
Mounting structure for the installation of photovoltaic panels

on flat roofs covered with roofing felt

System: **DP-DNHWE (10°, 15°, 20°) (glued)**

ST N





Structure description

Complete support system for fixing the panels horizontally at angles of 10°,15° and 20° on a flat roof covered with roofing felt or membrane without disturbing the roofing or using additional ballasting.

Technical description:

Materials of the support system:
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
Structure tested for strength.

Structure assembly variants:

- glued
- anchored to the roof
- ballast (after using vibration damping pads and ballast bases)
- aluminum mounting rail

Advantages:

- quick installation and low price
- structure tested for strength
- steel in Magnelis® coating guarantees very high corrosion resistance
- fixing the panel holders to the main profile with one screw and channel nut
- variable adjustment of the spacing of holders in the main profile
- longitudinal holes for panel mounting in the UPDC...MC and UPGC...MC holders extend the tolerances for mounting of the panels to the structure mounted on the roof
- bottom holder for setting three angles: 10°, 15° and 20°
- possibility of mounting panels with any length
- no interference with roofing
- no additional roof load due to elimination of ballasting

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 table below allows you to select a set of holders (bottom + top) in order to obtain a structure with an appropriate angle of inclination of the panels.

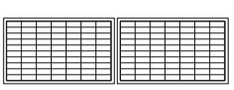
inclination angle of the panels	panel's bottom holder	panel's top holder
10°	UPDCNMC	UPGGC10MC
15°	UPDCNMC	UPGGC15MC
20°	UPDCNMC	UPGGC20MC

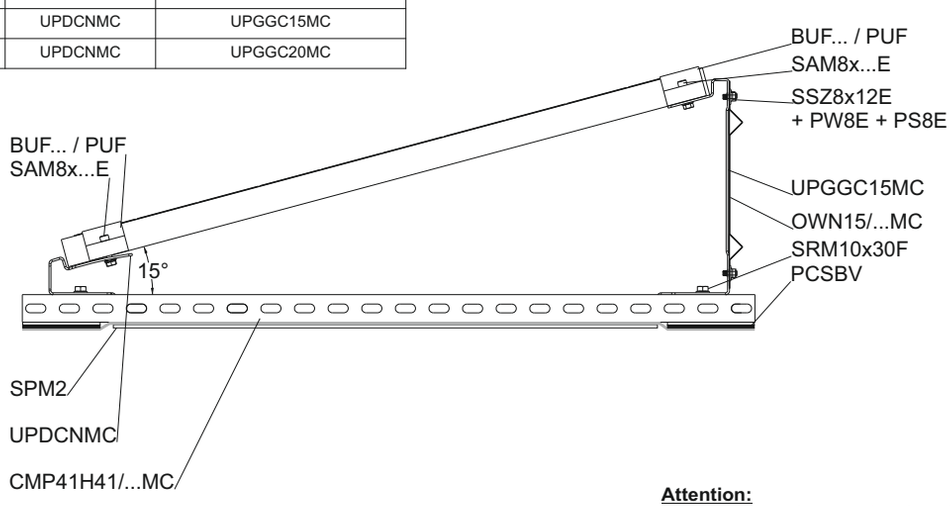
Maximum modules dimensions:

· 1150x2100 mm

Arrangement of the modules:

· horizontal - H





Attention:

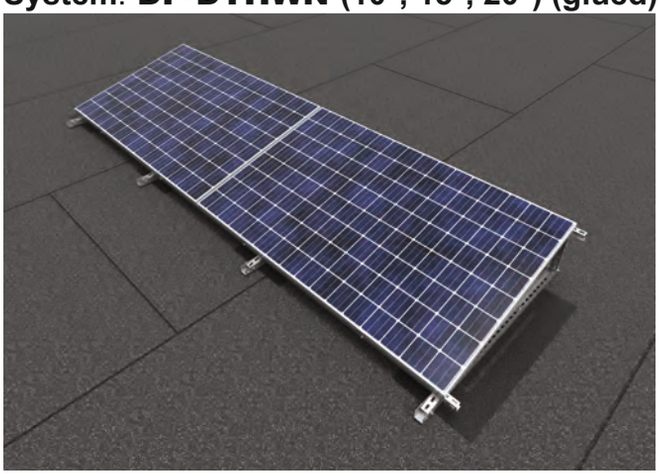
Please refer to the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

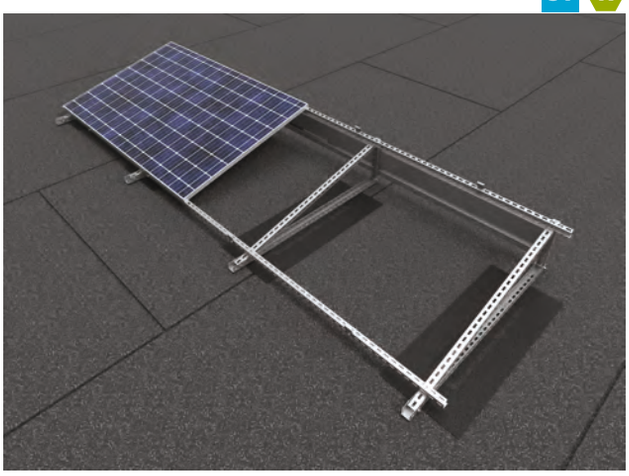
Detailed information on the products can be found on pages 59-110

Mounting structure for the installation of photovoltaic panels

on flat roofs covered with roofing felt

System: **DP-DTHWN** (10°, 15°, 20°) (glued)





Structure description:
Complete support system for fixing the panels horizontally at angles of 10°,15° and 20° on a flat roof covered with roofing felt or membrane without disturbing the roofing or using additional ballasting.

Technical description:
Materials of the support system:
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
Structure tested for strength.

Structure assembly variants:
- glued
- anchored to the roof
- ballast (after using vibration damping pads and ballast bases)
- aluminum mounting rail

Advantages:
- limited number of components and torsion points due to the use of a mounting base at the top of the central vertical channel
- strength-tested construction
- made of sheet metal with coating: Magnelis®, MagiZinc®, PosMAC guarantees very high corrosion resistance
- possibility to install panels of any length
- no interference with roof sheathing
- thanks to the use of SPM... eliminated additional load on the roof in the form of ballast

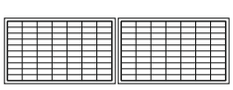
Warranty:
BAKS provides a 10 year warranty period for the components included in the support structure - only if all conditions of the manufacturer's warranty are met.

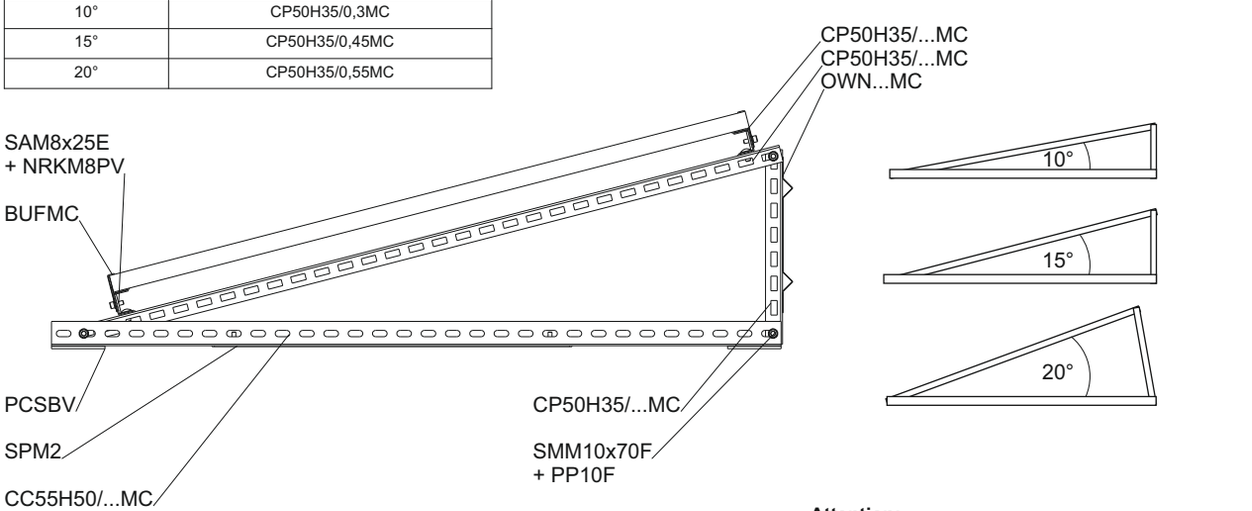
The table below allows you to select channels mounted vertically in order to obtain a structure with the appropriate angle of inclination of the panels.

inclination angle of the panels	U-Profil
10°	CP50H35/0,3MC
15°	CP50H35/0,45MC
20°	CP50H35/0,55MC

Maximum modules dimensions:
· 1400x2500 mm

Arrangement of the modules:
· horizontal - H





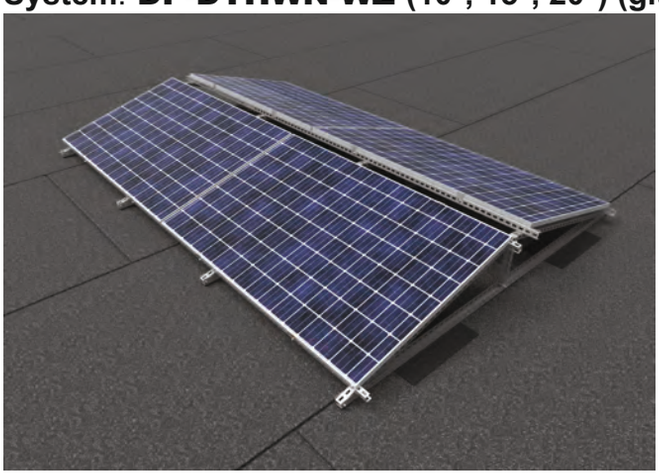
Attention:
Please refer to the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

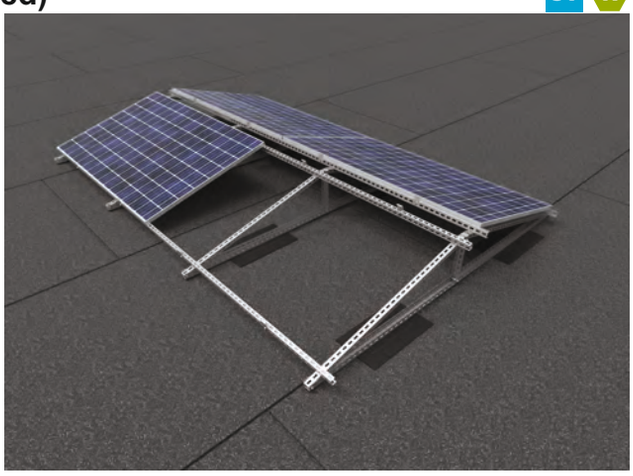
Detailed information on the products can be found on pages 59-110

Mounting structure for the installation of photovoltaic panels

on flat roofs covered with roofing felt

System: **DP-DTHWN-WZ** (10°, 15°, 20°) (glued)





Structure description:
Complete support system for fixing the panels horizontally at angles of 10°,15° and 20° on a flat roof covered with roofing felt or membrane without disturbing the roofing or using additional ballasting.

Technical description:
Materials of the support system:
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
Structure tested for strength.

Structure assembly variants:
- glued
- anchored to the roof
- ballast (after using vibration damping pads and ballast bases)
- aluminum mounting rail

Advantages:
- limited number of components and torsion points due to the use of a mounting base at the top of the central vertical channel
- strength-tested construction
- made of sheet metal with coating: Magnelis®, MagiZinc®, PosMAC guarantees very high corrosion resistance
- possibility to install panels of any length
- no interference with roof sheathing
- thanks to the use of SPM... eliminated additional load on the roof in the form of ballast

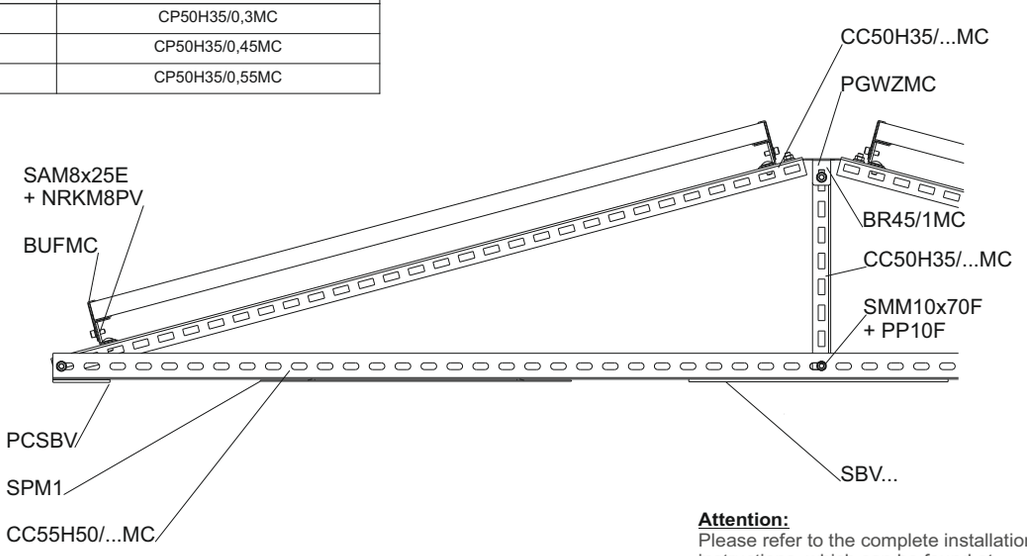
Warranty:
BAKS provides a 10 year warranty period for the components included in the support structure - only if all conditions of the manufacturer's warranty are met.

The table below allows you to select channels mounted vertically in order to obtain a structure with the appropriate angle of inclination of the panels.

inclination angle of the panels	U-Profil
10°	CP50H35/0,3MC
15°	CP50H35/0,45MC
20°	CP50H35/0,55MC

Maximum modules dimensions:
· 1400x2500 mm

Arrangement of the modules:
· horizontal - H

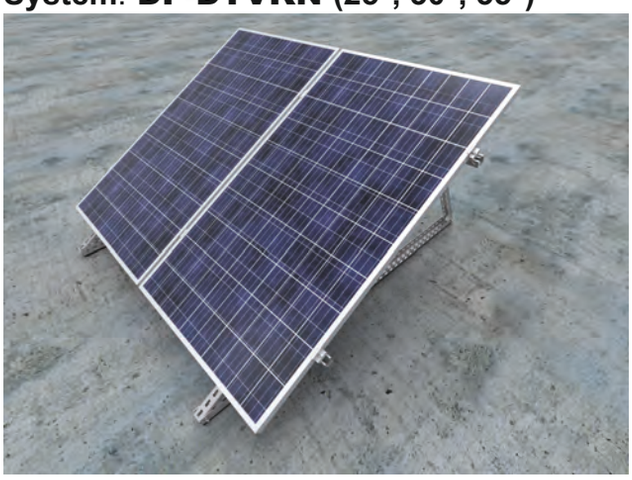


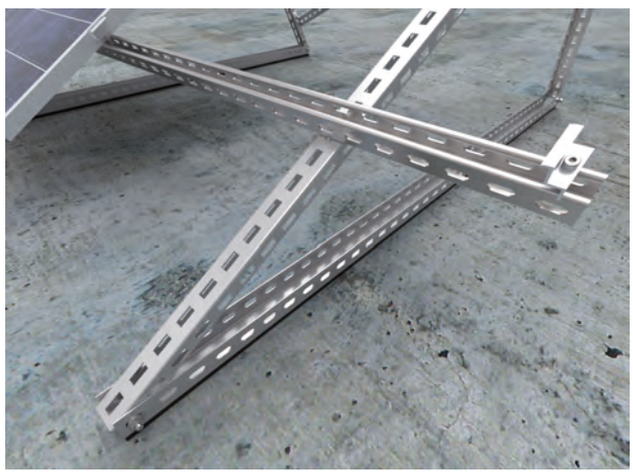
Attention:
Please refer to the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

Detailed information on the products can be found on pages 59-110

Mounting structure for the installation of photovoltaic panels
on flat roofs

System: **DP-DTVKN (25°, 30°, 35°)**





Structure description
Complete support system for fixing the panels vertically at angles of 25°, 30° and 35° on a flat roof. Anchored structure.

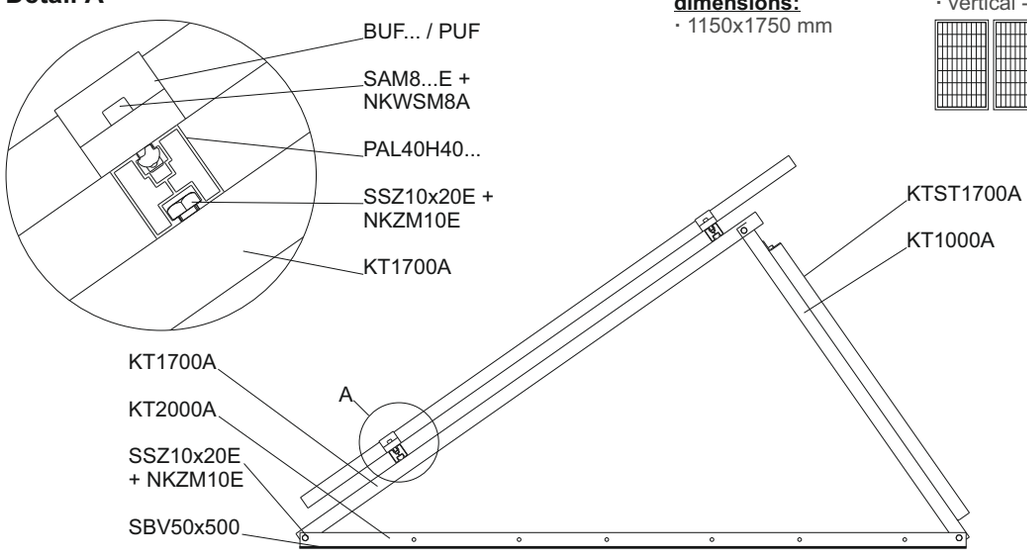
Technical description:
Materials of the support system:
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
Structure tested for strength.

Structure assembly variants:
• anchored to the roof
• ballast (after using vibration damping pads and ballast bases)

Advantages:
- quick installation
- low price
- structure tested for strength
- high stability of the structure
- steel in Magnelis® coating guarantees very high corrosion resistance
- possibility of fixing the panels on aluminium and steel profiles in Magnelis® coating
- possibility of setting three angles: 25°, 30° and 35°

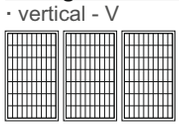
Warranty
BAKS provides a 10 year warranty period for the components included in the support structure - only if all conditions of the manufacturer's warranty are met.

Detail A



Maximum modules dimensions:
· 1150x1750 mm

Arrangement of the modules:
· vertical - V



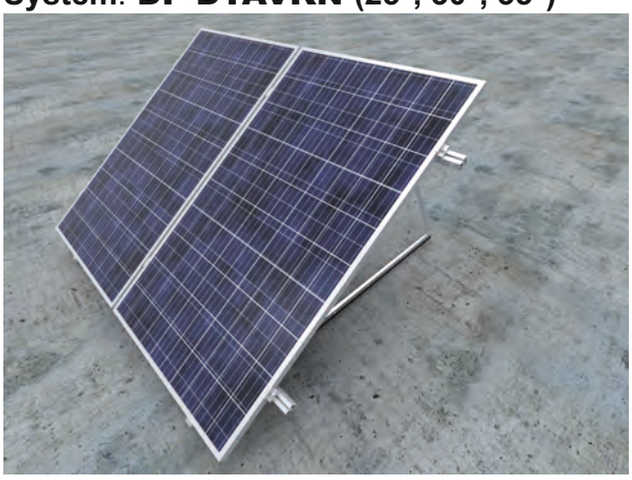
For the ballast variant, the ballast value can be even about 195 kg/panel. The size of the ballast in each case must be determined by a licensed builder.

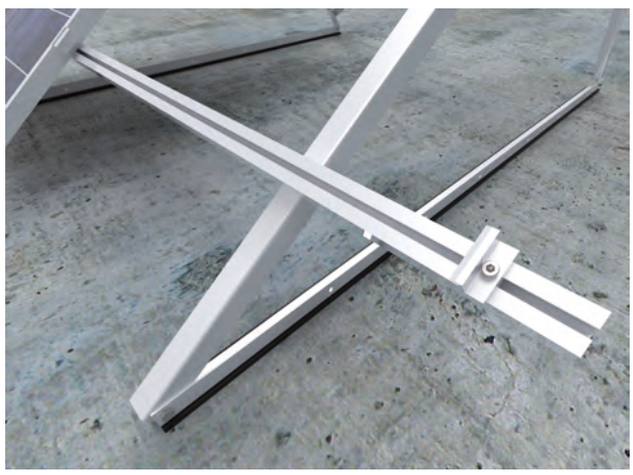
Attention:
Please refer to the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

Detailed information on the products can be found on pages 59-110

Mounting structure for the installation of photovoltaic panels
on flat roofs

System: **DP-DTAVKN** (25°, 30°, 35°)





Structure description
Complete support system for fixing the panels vertically at angles of 25°, 30° and 35° on a flat roof.
Anchored structure.

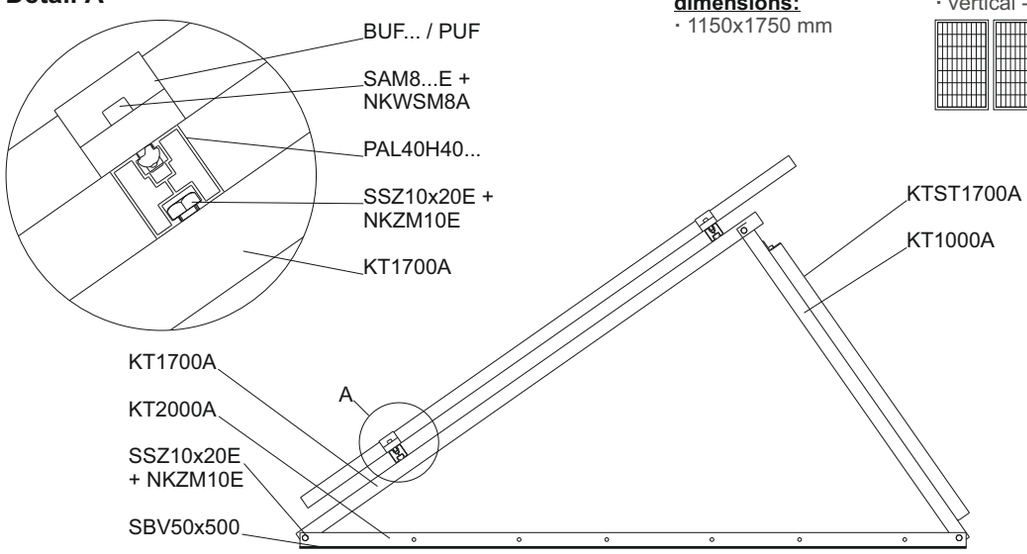
Technical description:
Materials of the support system:
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
Structure tested for strength.

Structure assembly variants:
• anchored to the roof
• ballast (after using vibration damping pads and ballast bases)

Advantages:
- quick installation
- low price
- structure tested for strength
- high stability of the structure
- aluminium guarantees very high corrosion resistance and lowers the weight of the support structure
- possibility of setting three angles: 25°, 30° and 35°
- lightweight structures, dedicated to roofs with low load capacity

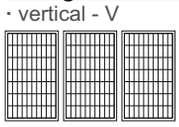
Warranty
BAKS provides a 10 year warranty period for the components included in the support structure - only if all conditions of the manufacturer's warranty are met.

Detail A



Maximum modules dimensions:
· 1150x1750 mm

Arrangement of the modules:
· vertical - V



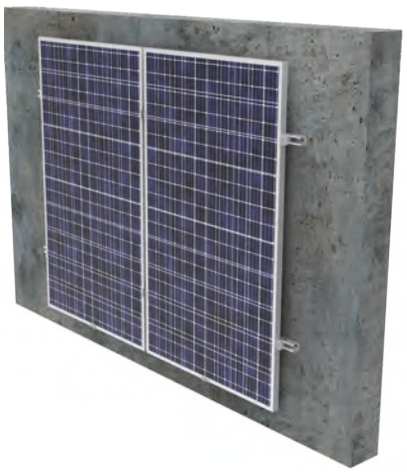
For the ballast variant, the ballast value can be even about 195 kg/panel. The size of the ballast in each case must be determined by a licensed builder.

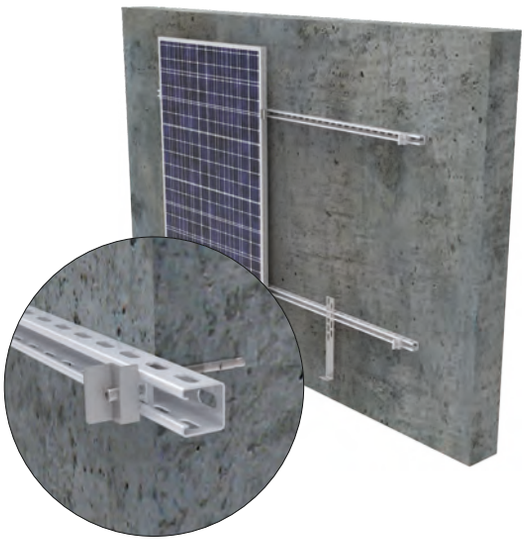
Attention:
Please refer to the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

Detailed information on the products can be found on pages 59-110

Mounting structure for the installation of photovoltaic panels
on walls

System: E-VKRN





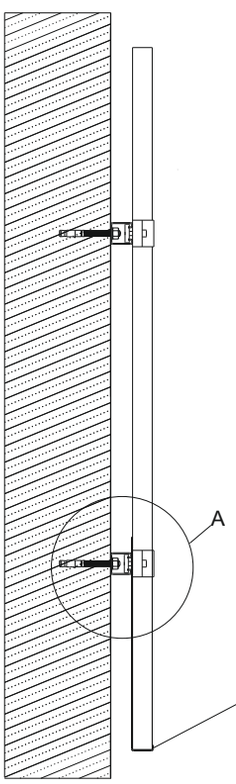
Structure description
Support system for quick installation of PV panels to building elevations.

Technical description:
Materials of the support system:
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
Structure tested for strength.

Structure assembly variants:
- Anchored with anchors for concrete
- Anchored with chemical anchors for concrete
- Anchored through with threaded rods (sandwich panel)

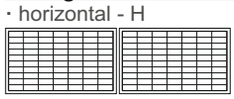
Advantages:
- quick installation
- low price
- high stability of the structure
- structure tested for strength
- steel in Magnelis® coating guarantees very high corrosion resistance

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.

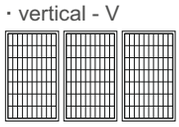


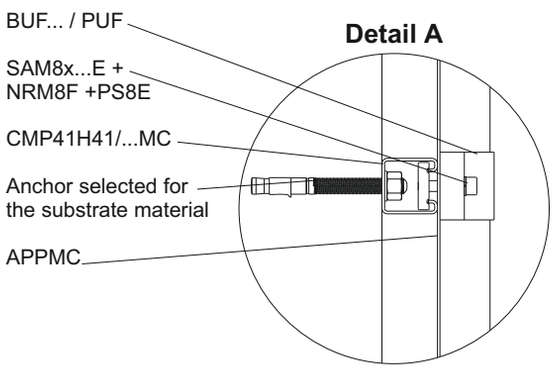
Maximum modules dimensions:
· 1150x1850 mm

Arrangement of the modules:
· horizontal - H



· vertical - V



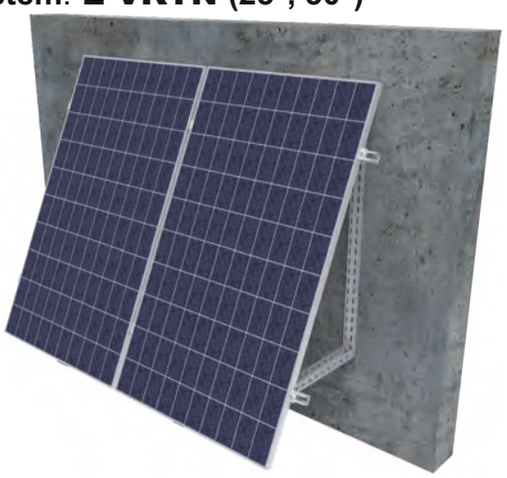


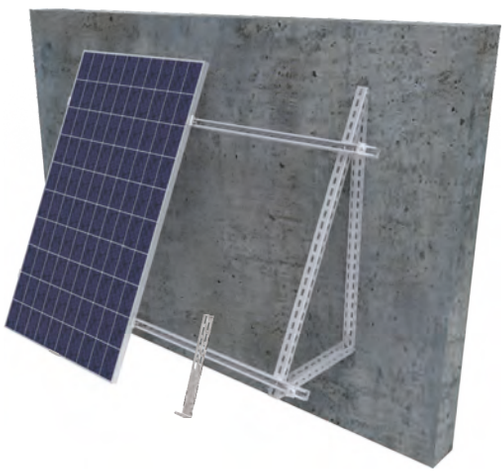
Attention:
Please refer to the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

Detailed information on the products can be found on pages 59-110

Mounting structure for the installation of photovoltaic panels
on walls

System: **E-VKTN** (25°, 30°)





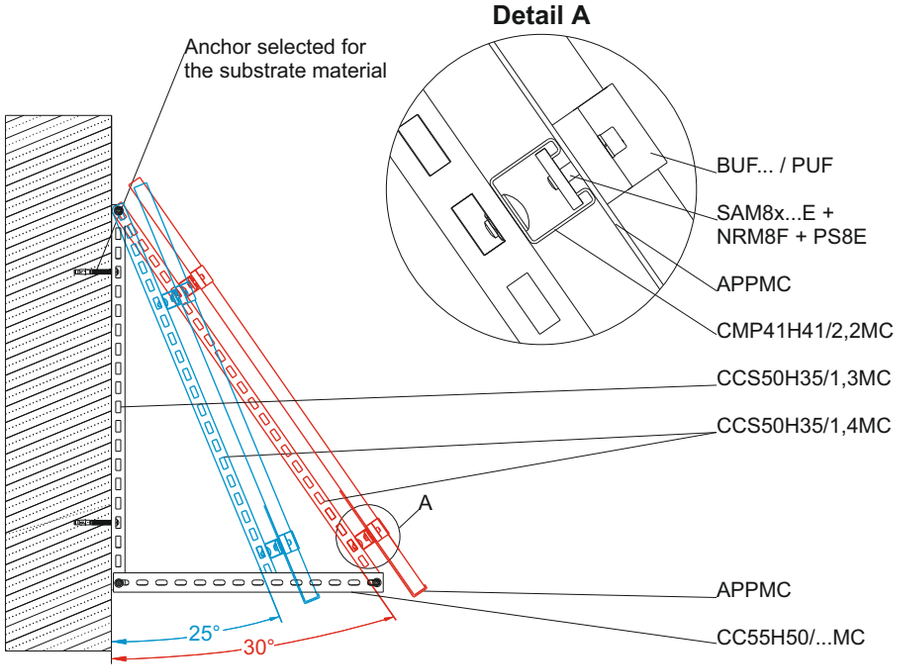
Structure description
Support system for quick installation of PV panels to building elevations.

Technical description:
Materials of the support system:
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating

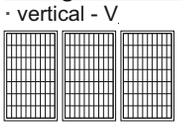
Structure assembly variants:
- Anchored with anchors for concrete
- Anchored with chemical anchors for concrete
- Anchored through with threaded rods (sandwich panel)

Advantages:
- quick installation
- low price
- high stability of the structure
- two inclination angle variants: 25° and 30°
- steel in Magnelis® coating guarantees very high corrosion resistance

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.



Arrangement of the modules:
· vertical - V



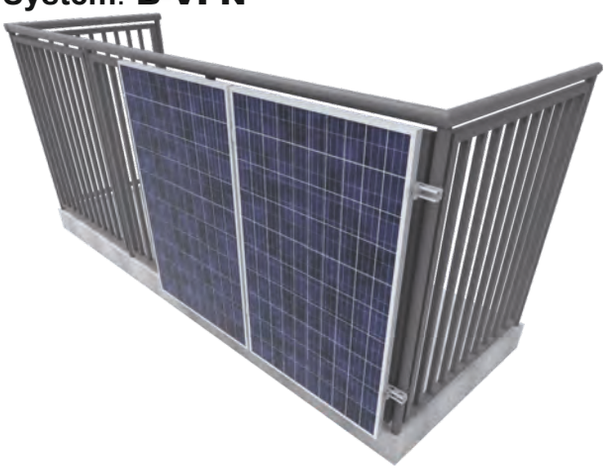
Maximum modules dimensions:
· 1150x1850 mm

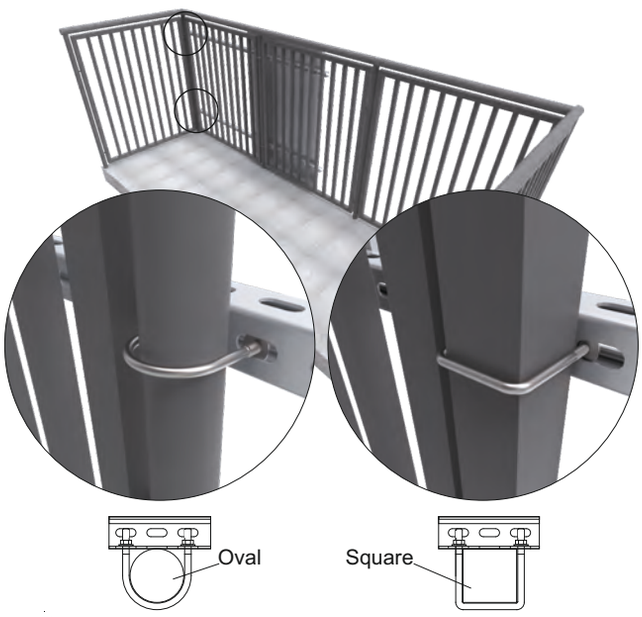
Attention:
Please refer to the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

Detailed information on the products can be found on pages 59-110

Mounting structure for the installation of photovoltaic panels
on balcony railings

System: **B-VPN**





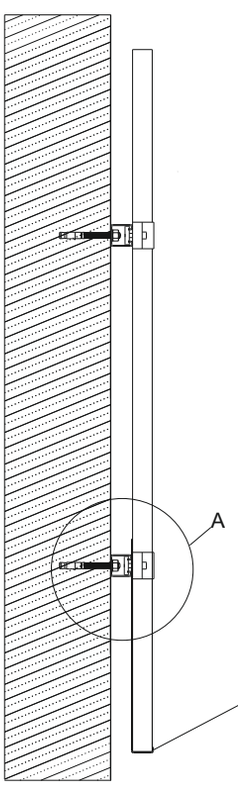
Structure description
Support system for easy installation of PV panels to balcony railings.

Technical description:
Materials of the support system:
MC- Coated structural steel:
Magnelis®, MagiZinc®, PosMAC
A- Aluminium
E- Stainless steel
F- Steel in zinc flake coating
Structure tested for strength.

Structure assembly variants:
- screwed to balcony railings with u-bolts of round or square section

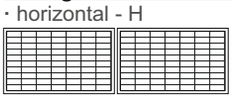
Advantages:
- quick installation
- low price
- high stability of the structure
- structure tested for strength
- steel in Magnelis® coating guarantees very high corrosion resistance

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.

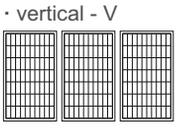


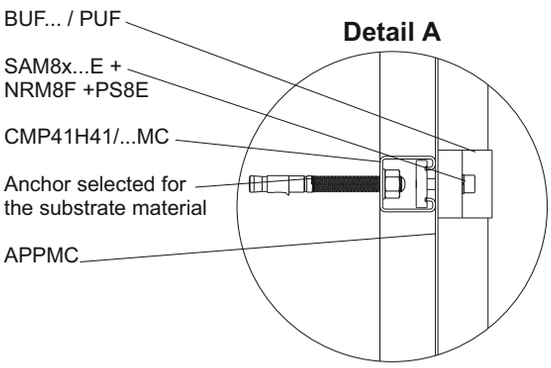
Maximum modules dimensions:
· 1150x1850 mm

Arrangement of the modules:
· horizontal - H



· vertical - V



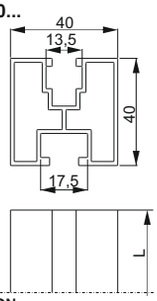


Attention:
Please refer to the complete installation instructions, which can be found at www.baks.com.pl or under the QR code.

Detailed information on the products can be found on pages 59-110

Aluminum Profile

PAL40H40...



APPLICATION
Supporting panels in structures for sloping roofs and flat roofs, mounting panels to the supporting structure

PAL40H40...

CODE	lenght L mm	kg 1 pcs.	catalogue no.	pcs.
PAL40H40/1,15	1150	1,10	894510	1
PAL40H40/2,1	2100	1,97	894621	1
PAL40H40/2,2	2200	2,10	894622	1
PAL40H40/3,15	3150	2,96	894631	1
PAL40H40/3,3	3300	3,00	894633	1
PAL40H40/6,3	6300	5,91	894663	1
PAL40H40/6,6	6600	6,10	894666	1

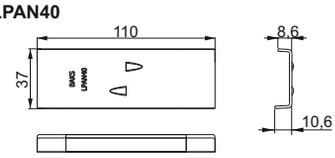
Advantages:
- **stable panel support in structures for sloping roofs and flat roofs**
- **the width of the sockets in the profile prevents screws and hexagonal nuts from turning (M8 for the upper socket and M10 for the lower socket)**
- **special profile cross-section to increase its strength**

STM

MATERIAL
Aluminium (EN AW-6063)
Available finishes:
L- powder coating RAL9005 (up to 6 m length)

Aluminium Profile Connector

LPAN40



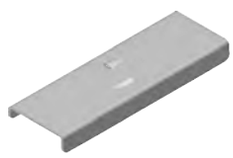
APPLICATION
Screwless connection of aluminium profiles

LPAN40

CODE	kg 1 pcs.	catalogue no.	pcs.
LPAN40	0,06	890512	100

Advantages:
- **end cuttings for easy pre-positioning of the connector into the profile**
- **the shape of the connector provides a very stable Profile connection**
- **depth limiters for the connector, which prevent sliding the profile too far**
- **made of Magnelis®-coated material with very high corrosion resistance**
- **high strength parameters of the connection**

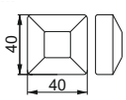
STM



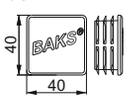
MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Protection Cap for PAL40H40 Aluminium Profile

NOPAL40x40...



NOWPAL40x40SR



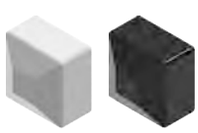
APPLICATION
Blanking of 40x40 mm aluminium profiles

NOPAL...

CODE	catalogue no.	pcs.
NOPAL40x40CZ	890403	100
NOPAL40x40SR	890401	100

Advantages:
- **improved aesthetics of PV Installations**
- **improved safety of inSteellers during Installation**

STM



MATERIAL
Poliethylene. Silver RAL 9006, black RAL 9005

NOWPAL40x40SR

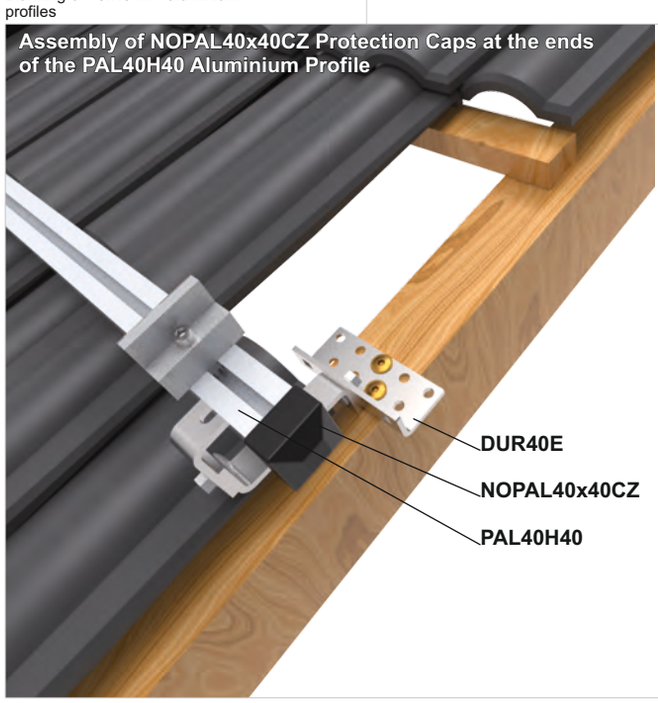
CODE	catalogue no.	pcs.
NOWPAL40x40SR	890404	100

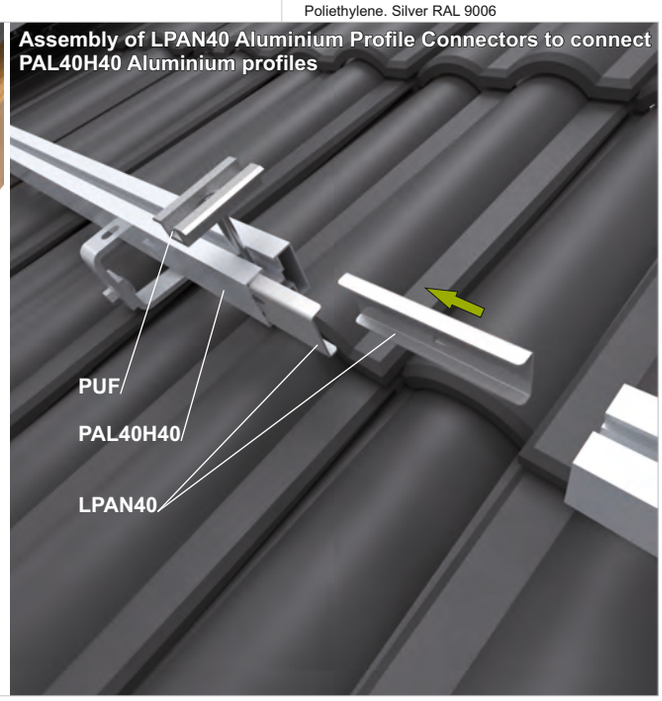
Advantages:
- **improved aesthetics of PV Installations**
- **improved safety of inSteellers during Installation**

N
STM

MATERIAL
Poliethylene. Silver RAL 9006

Note: orders for PV farms ≥0.5 MW delivered in collective packages

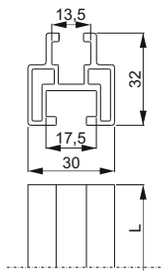




STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Aluminum Profile

PAL30H32...



PAL30H32...

CODE	lenght L mm	1 pcs. kg	catalogue no.	pcs.
PAL30H32/1,15	1150	0,84	893210	1
PAL30H32/2,1	2100	2,10	893221	1
PAL30H32/2,2	2200	2,20	893222	1
PAL30H32/3,15	3150	3,15	893231	1
PAL30H32/3,3	3300	3,30	893233	1

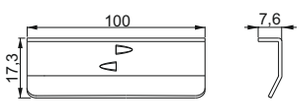
Advantages:
- **stable panel support in structures for sloping roofs and flat roofs**
- **the width of the sockets in the profile prevents screws and hexagonal nuts from turning (M8 for the upper socket and M10 for the lower socket)**
- **special profile cross-section to increase its strength**

APPLICATION
Supporting panels in structures for sloping roofs and flat roofs, mounting panels to the supporting structure

MATERIAL
Aluminium (EN AW-6063)
Available finishes:
L- powder coating RAL9005

Aluminium Profile Connector

LPAN30



LPAN30

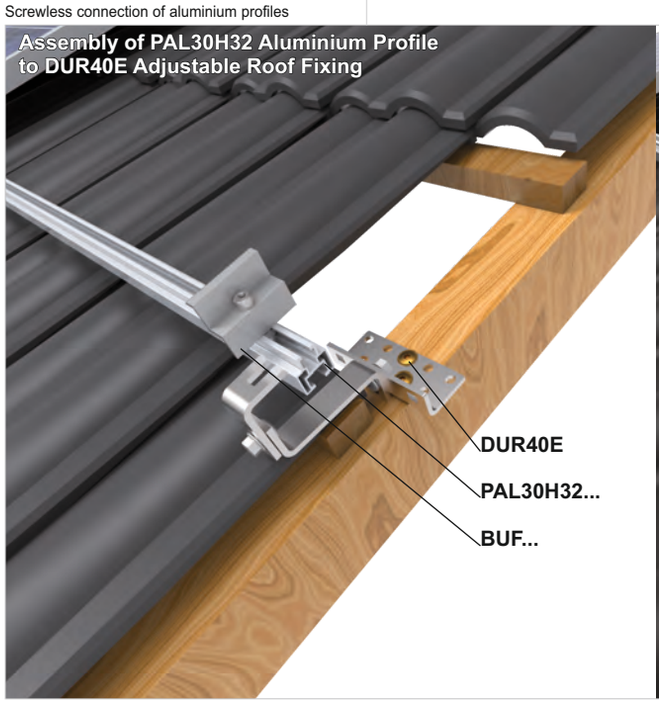
CODE	1 pcs. kg	catalogue no.	pcs.
LPAN30	0,03	890630	100

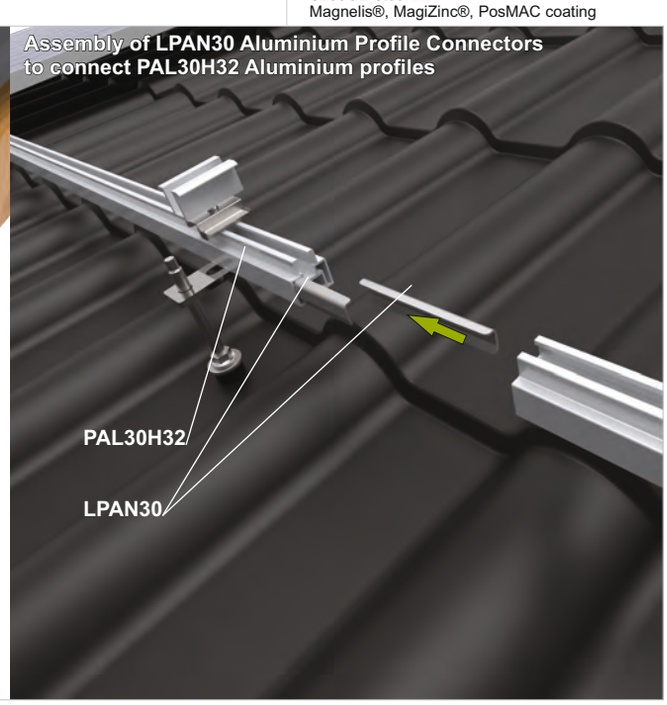
Advantages:
- **end cuttings for easy pre-positioning of the connector into the profile**
- **the shape of the connector provides a very stable Profile connection**
- **depth limiters for the connector, which prevent sliding the profile too far**
- **made of Magnelis®-coated material with very high corrosion resistance**
- **high strength parameters of the connection**

APPLICATION
Screwless connection of aluminium profiles

MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Note: orders for PV farms ≥0.5 MW delivered in collective packages

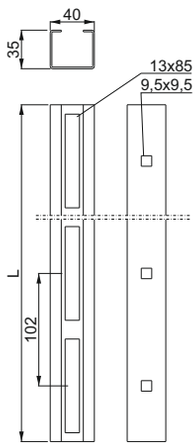




STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Support Channel

CWP40H35...MC



APPLICATION
Supporting panels in structures for sloping roofs and flat roofs, mounting panels to the supporting structure

CWP40H35...MC

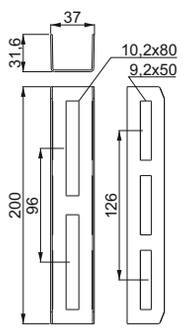
CODE	lenght L mm	kg 1 pcs.	catalogue no.	pcs.
CWP40H35/2,2MC	2244	2,87	620412	1
CWP40H35/3,3MC	3366	4,30	620413	1

Advantages:
- stable support of panels in pitched roof structures and flat roofs, assembly of panels to the supporting structure
- thanks to the use of structural steel, channel sections are characterized by very high endurance parameters
- 13x85 holes allow for mounting profiles to handles anywhere without drilling
- 9.5 mm square holes in the sides of the channel allow screwing on additional equipment, e.g. cable trays, power optimizers

MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Channel Connector

LC40H35MC



APPLICATION
Connecting CWP40H35...MC Channels

LC40H35MC

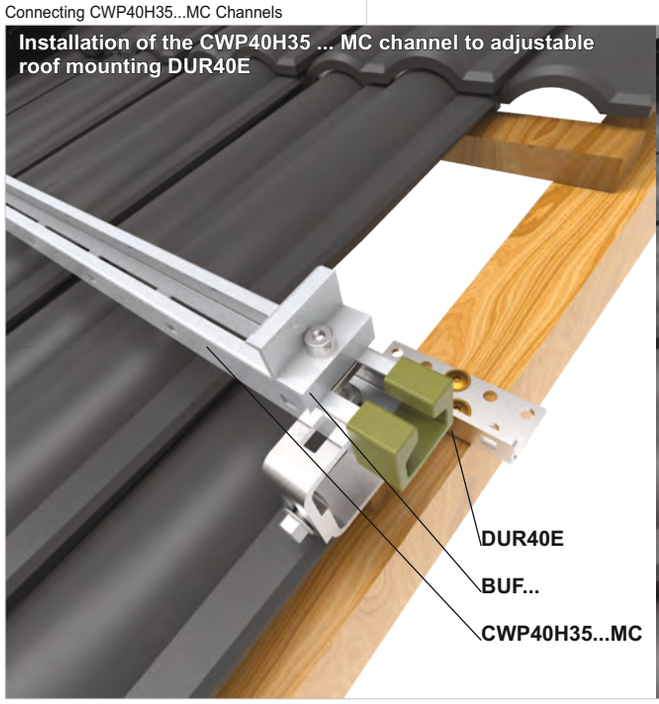
CODE	kg 1 pcs.	catalogue no.	pcs.
LC40H35MC	0,16	620414	100

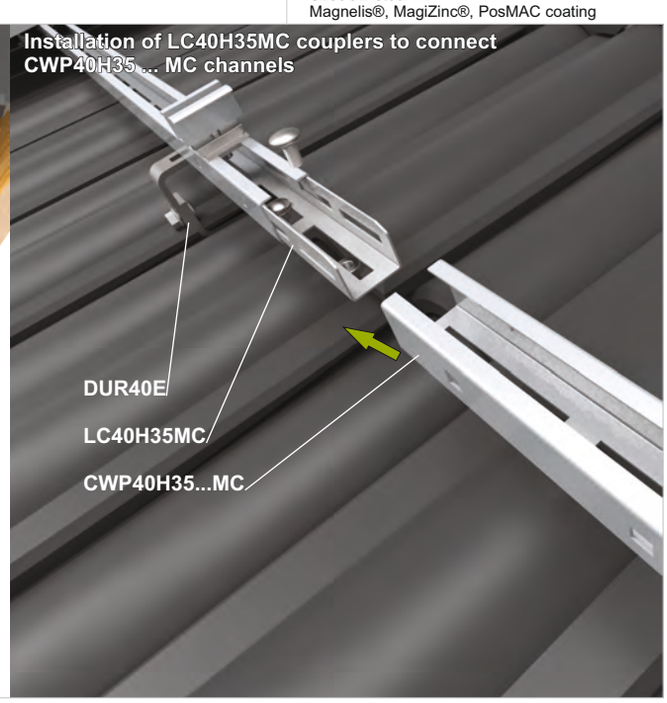
Advantages:
- stable, strong connection of channel sections
- the length of the link increases the adjustment range
- specially designed perforation in the connector allows channel installation anywhere without drilling

For the assembly use 2 x SGKFM10x20PV Screw Sets

MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Note: orders for PV farms ≥0.5 MW delivered in collective packages

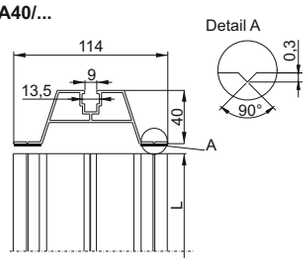




STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Aluminum Mounting Rail

SMA40/...



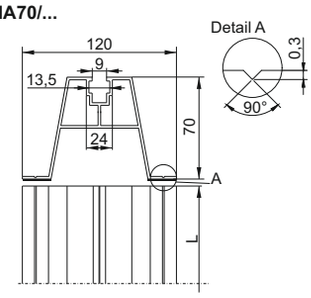
SMA40/...

CODE	lenght L mm	kg 1 pcs	catalogue no.	pcs.
SMA40/033	330	0,39	890433	45
SMA40/6	6050	7,02	890466	20

Advantages:
- rail height 40 mm ensures quick Installation and good ventilation under PV panels
- special section to increase strength of the element
- the contact surfaces between the rail and the roof equipped with sealing rubber in SMA40/033
- special groove (detail A in the picture) allows for easy positioning of the screws when screwing in

For the assembly use min. 4 x SMDP6x25E Screws

SMA70/...



SMA70/...

CODE	lenght L mm	kg 1 pcs	catalogue no.	pcs.
SMA70/033	330	0,58	890733	20
SMA70/6	6050	10,44	890766	20

Advantages:
- rail height 70 mm ensures quick Installation and good ventilation under PV panels
- special section to increase strength of the element
- the contact surfaces between the rail and the roof equipped with sealing rubber in SMA70/033
- special groove (detail A in the picture) allows for easy positioning of the screws when screwing in

For the assembly use min. 4 x SMDP6x25E Screws

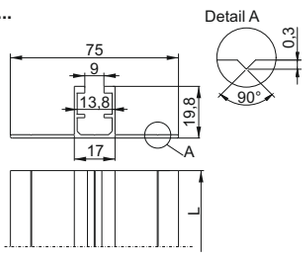
APPLICATION
Fixing PV panels to trapezoidal metal sheet, e.g. DS-V6aN structure

MATERIAL
Aluminium (EN AW-6063)
Available finishes:
L- powder coating RAL9005

Note: orders for PV farms ≥0.5 MW delivered in collective packages

Aluminum Mounting Rail

SM...



SM...

CODE	lenght L mm	kg 1 pcs	catalogue no.	pcs.
SM400	400	0,25	890040	50
SM6500	6500	4,08	890046	50

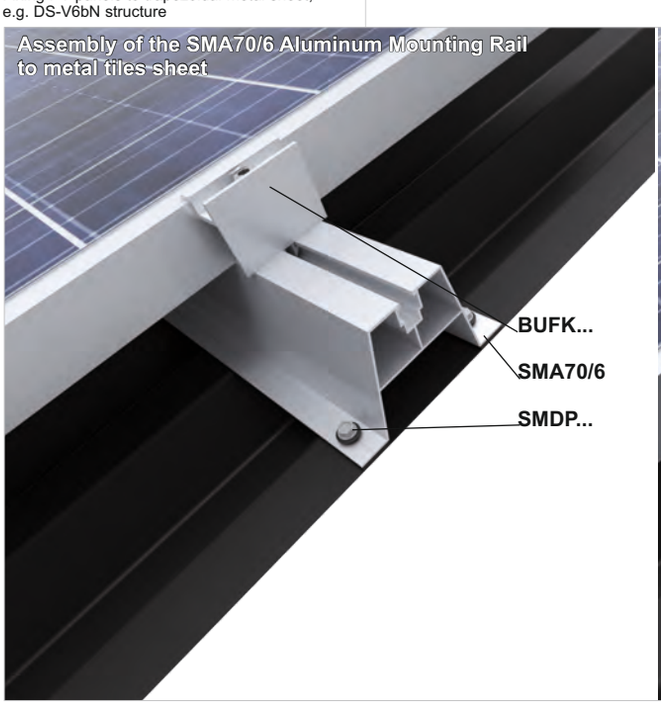
Note:
The rail is not equipped with sealing rubber.
Using EPDMW2x40 Cellular Rubber is recommended.

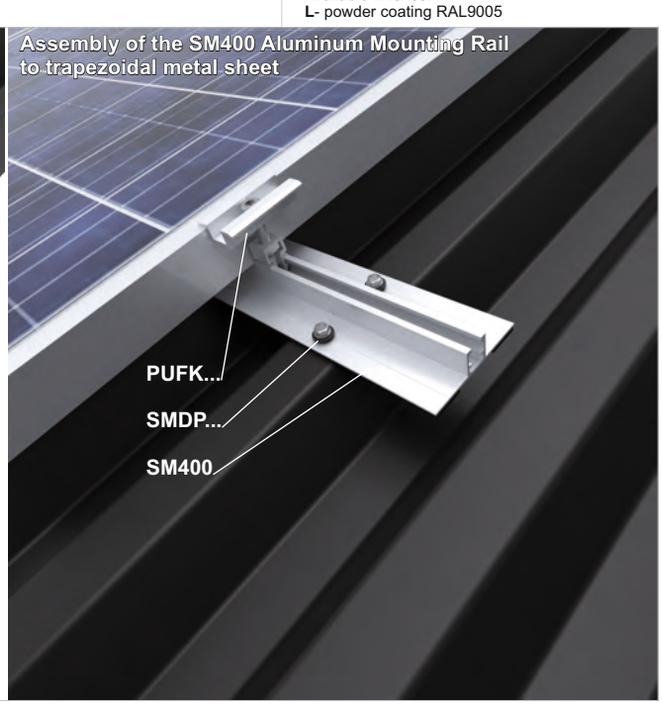
Advantages:
- special groove (detail A in the picture) allows easy positioning of the screws when screwing in
- low height to allow for aesthetic Installation of the panels close to the roof surface

For the assembly use min. 4 x SMDP6,0x25E Screws

APPLICATION
Fixing PV panels to trapezoidal metal sheet, e.g. DS-V6bN structure

MATERIAL
Aluminium (EN AW-6063)
Available finishes:
L- powder coating RAL9005

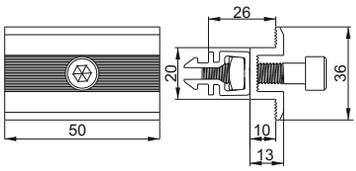




STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Middle Holder Click

PUFK



APPLICATION
Fixing PV panels to aluminium profiles, aluminium mounting rails and UPDCNMC and UPGGC...NMC holders

PUFK

CODE	1 pcs	catalogue no.	pcs.	
PUFK	0,04	890300	50	

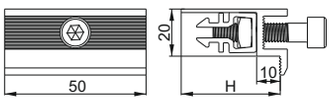
The set includes a clamp, SAM8... screw, NKWM8E square nut and click clip

Advantages:
- **quick snap-in assembly**
- **possibility of installation in SM... rails, PAL... profiles, UPDCNMC and UPGGC...NMC holders**

STM

Side Holder Click

BUFK...



APPLICATION
Fixing PV panels to aluminium profiles, aluminium mounting rails and UPDCNMC and UPGGC...NMC holders

BUFK...

CODE	dimension H mm	1 pcs	catalogue no.	pcs.
BUFK32	32	0,05	897432	50
BUFK34	34	0,06	897434	50
BUFK35	35	0,06	897435	50
BUFK38	38	0,07	897438	50
BUFK40	40	0,07	897440	50
BUFK42	42	0,07	897442	50
BUFK45	45	0,08	897446	50
BUFK50	50	0,08	897450	50

The set includes a clamp, SAM8... screw, NKWM8E square nut and click clip

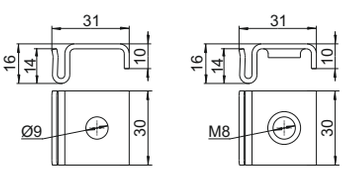
Advantages:
- **quick snap-in assembly**
- **possibility of installation in SM... rails, PAL... profiles, UPDCNMC and UPGGC...NMC holders**

STM

MATERIAL
Aluminium (EN AW-6063)
Available finishes:
L- powder coating RAL9005

Middle Holder for Freestanding Structures

UPPMC **UPPM8MC**



APPLICATION
Fixing PV panels to channels without drilling holes in the profile, in case that the mounting points of the clamps do not coincide with the factory profile perforation

UPP...MC

± 2,0 mm

CODE	1 pcs	catalogue no.	pcs.	MOQ pcs.	
UPPMC	0,03	897301	100	100	ST
UPPM8MC	0,03	897311	100	100	STM

Advantages:
- **made of Magnelis®-coated material with very high corrosion resistance**
- **allows Installation without drilling in case there are no holes for the clamp mounting**
- **variable setting**
- **Installation on profile edge with thickness up to 3,0 mm**
- **M8 threaded hole in UPPM8MC**

For the Installation of UPPMC use 1 x SAM8x...E Screw and NKZM8E Nut

For the Installation of UPPM8MC use 1 x SAM8x...E Screw

ST

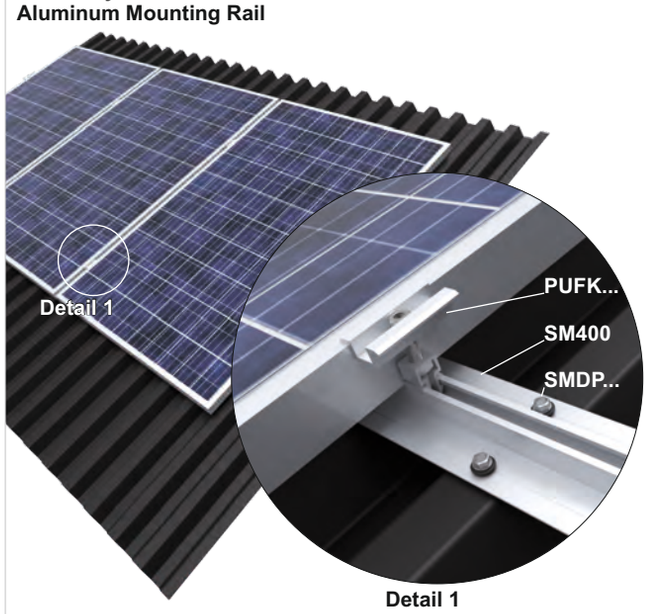
N

STM

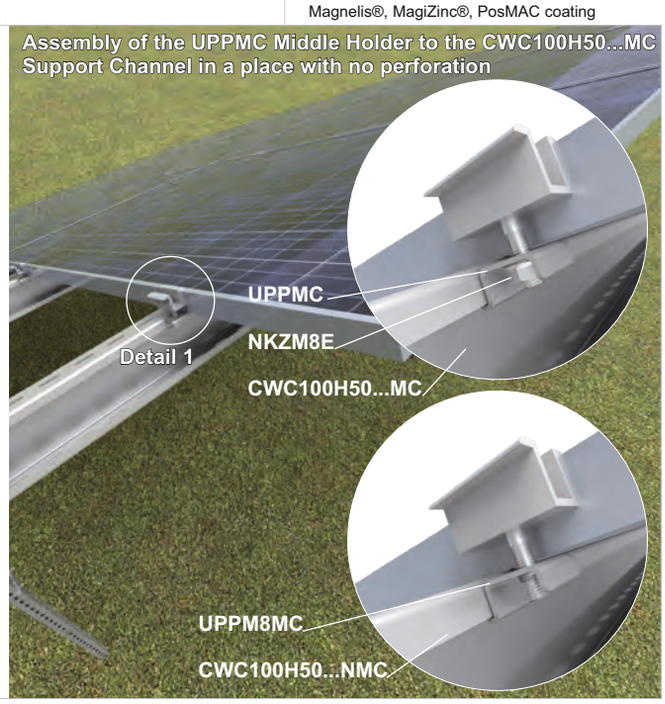
MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Note: orders for PV farms ≥0.5 MW delivered in collective packages

Assembly of the PUFK Middle Holder Click to the SM400 Aluminum Mounting Rail



Assembly of the UPPMC Middle Holder to the CWC100H50...MC Support Channel in a place with no perforation

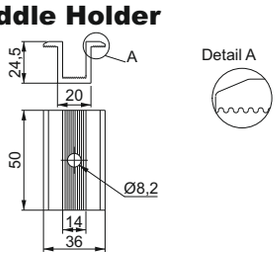


STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 1,2 1,5 2,0 3,0 4,0

Middle Holder

PUF



APPLICATION
Fixing PV panels to aluminium profiles, aluminium mounting rails, UPDCNMC and UPGGC...NMC holders or channels

PUF

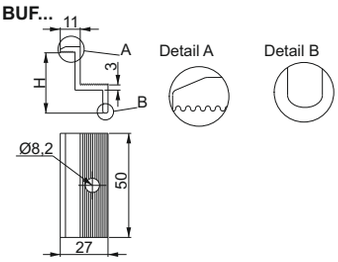
CODE	1 pcs	catalogue no.	pcs.
PUF	0,02	897300	100

Advantages:
- **longitudinal grooves at the panel pressure point and at the contact surface between the clamp and the profile increase the stability of the fixing**
- **special cross-section to increase the strength of the element**
- **notches for improved grip**

STM

Side Holder

BUF...

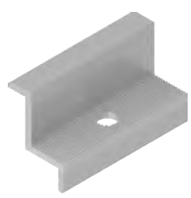


APPLICATION
Fixing PV panels to aluminium profiles, aluminium mounting rails, UPDCNMC and UPGGC...NMC holders or channels

BUF...

CODE	dimension H mm	1 pcs	catalogue no.	pcs.
BUF30	30	0,02	897330	50
BUF32	32	0,02	897332	50
BUF33	33	0,02	897333	50
BUF35	35	0,02	897335	50
BUF38	38	0,02	897338	50
BUF40	40	0,02	897340	50
BUF42	42	0,02	897342	50
BUF45	45	0,02	897345	50
BUF50	50	0,03	897350	50

Advantages:
- **longitudinal grooves at the panel pressure point and at the contact surface between the clamp and the profile increase the stability of the fixing**
- **special cross-section to increase the strength of the element**
- **notches for improved grip**

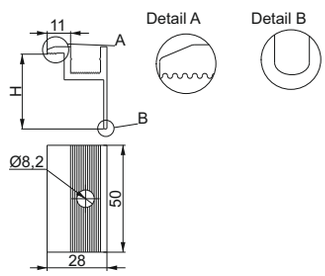


STM

MATERIAL
Aluminium (EN AW-6063)
Available finishes:
L- powder coating RAL9005

Universal Side Holder

UBUF...

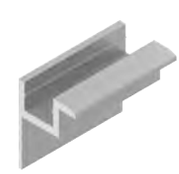


APPLICATION
Fixing PV panels to aluminium profiles, aluminium mounting rails, UPDCNMC and UPGGC...NMC holders or channels

UBUF...

CODE	dimension H mm	1 pcs	catalogue no.	pcs.
UBUF32	32	0,02	897632	50
UBUF33	33	0,02	897633	50
UBUF35	35	0,02	897635	50
UBUF38	38	0,02	897638	50
UBUF40	40	0,02	897640	50
UBUF42	42	0,02	897642	50
UBUF45	45	0,02	897745	50
UBUF50	50	0,03	897650	50

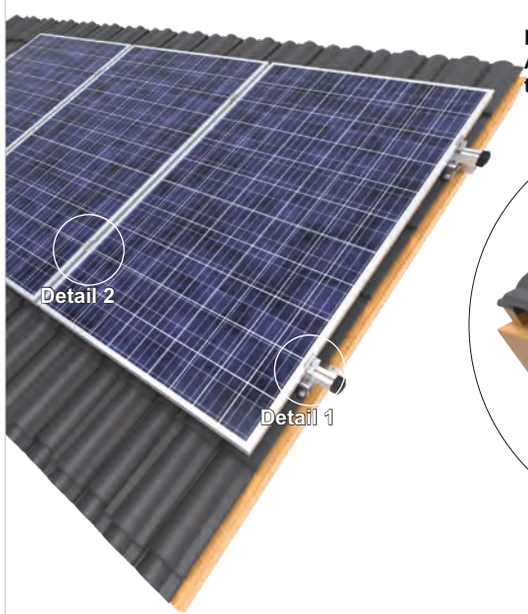
Advantages:
- **longitudinal grooves at the panel pressure point and at the contact surface between the clamp and the profile increase the stability of the fixing**
- **possibility of using with a standard screw or with a screw and snap-in element**
- **special cross-section to increase the strength of the elementp**



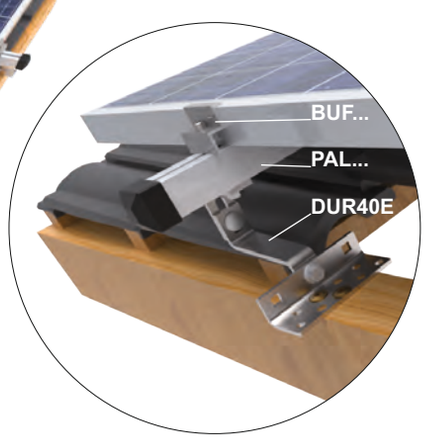
N
STM

MATERIAL
Aluminium (EN AW-6063)
Available finishes:
L- powder coating RAL9005

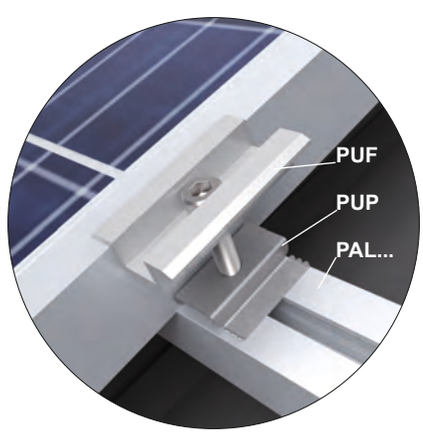
Note: orders for PV farms ≥0.5 MW delivered in collective packages



Detail 1:
Assembly of BUF… Side Holder to PAL... Aluminum Profile

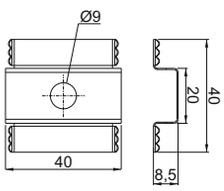


Detail 2:
Assembly of PUF… Middle Holder to PAL40H40 Aluminum Profile



STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Grounding Washer
PUP



APPLICATION
Installation at the contact surface between the panel frames and the supporting structure to ensure electrical continuity

PUP

CODE	1 pcs	catalogue no.	pcs.
PUP	0,05	**897303**	100

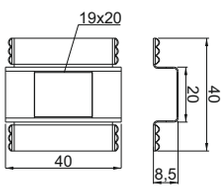
Advantages:
- no need to use earth connections in form of cables
- reduction of installation time
- allows the use of standard middle panel holders
- security enhancement
- ensured electrical continuity

STM

MATERIAL
Stainless steel

Note: orders for PV farms ≥0.5 MW delivered in collective packages

Grounding Washer
PUPK



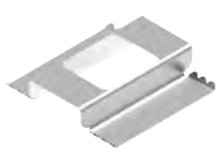
APPLICATION
Installation at the contact surface between the panel frames and the supporting structure to ensure electrical continuity

PUPK

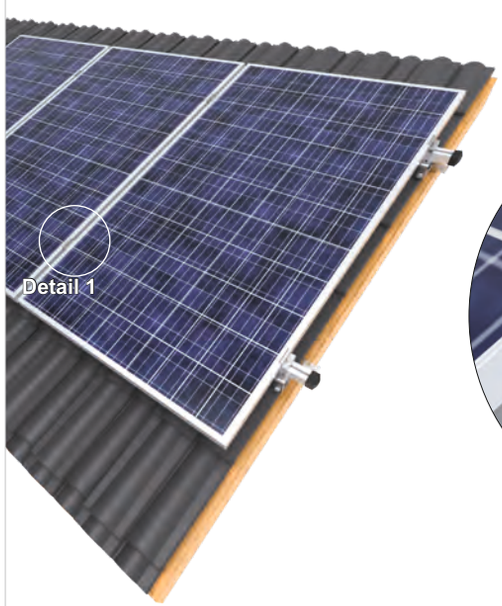
CODE	1 pcs	catalogue no.	pcs.
PUPK	0,05	**897304**	100

Advantages:
- no need to use earth connections in form of cables
- allows the use of click middle panel holders
- security enhancement
- ensured electrical continuity

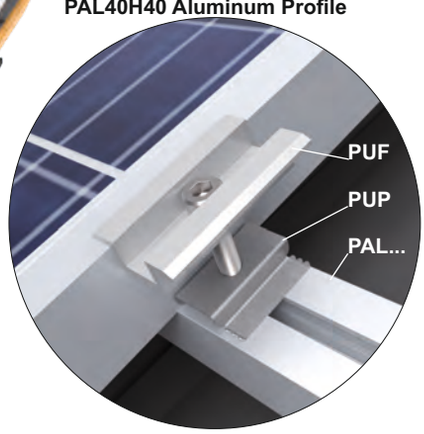
STM



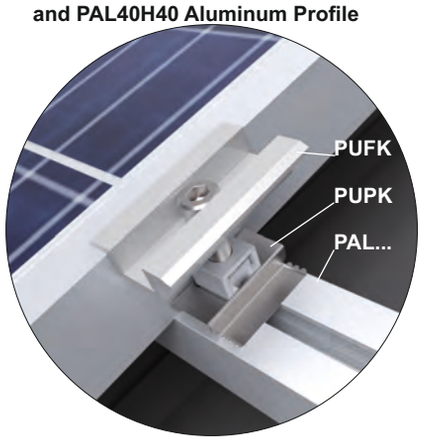
MATERIAL
Stainless steel



Option 1, Detail 1:
Assembly of PUP Grounding Washer with PUF Middle Holder and PAL40H40 Aluminum Profile



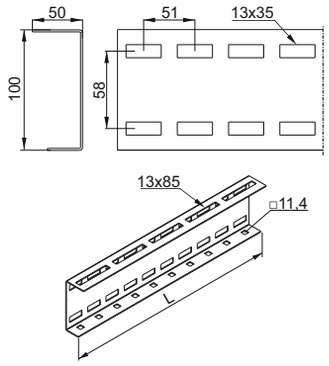
Option 2 click, Detail 1:
Assembly of PUPK Grounding Washer with PUFK Middle Holder Click and PAL40H40 Aluminum Profile



STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Profile

BDFC100...NMC



APPLICATION
Profile for determining the inclination angle of freestanding structures

BDFCH100...NMC

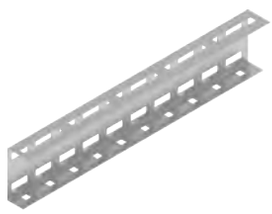
≠ 2,0 mm

CODE	lenght L mm	kg 1 pcs.	catalogue no.	MOQ pcs.	pcs.	
BDFCH100/2,75NMC	2754	6,40	863725	1	1	STM
BDFCH100/3,2NMC	3164	7,35	863132	1	1	STM

Advantages:
- extended perforation in the upper part allows for the Installation of panels of various dimensions without the need to drill additional holes in the profile
- dense and enlarged perforation in the side enables the Installation of structure within the angle range of 20-35 degrees
- perforation in the lower part allows the bracing profiles to be screwed on without the need to use additional elements
- made of Magnelis®-coated material with very high corrosion resistance

For the assembly use SGKFM10x20PV Screw Sets

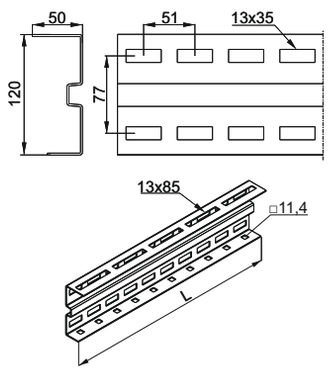
STM



MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Profile

BDFCH120...NMC



APPLICATION
Profile for determining the inclination angle of freestanding structures

BDFCH120...NMC

≠ 2,0 mm

CODE	lenght L mm	kg 1 pcs.	catalogue no.	MOQ pcs.	pcs.	
BDFCH120/3,6NMC	3570	10,67	863335	1	1	STM
BDFCH120/4,4NMC	4386	13,12	863343	1	1	STM
BDFCH120/4,8NMC	4794	14,33	863347	1	50	ST
BDFCH120/5,4NMC	5406	16,17	863354	1	1	STM

BDFTH120...NMC

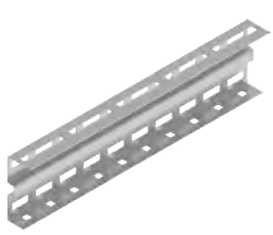
≠ 3,0 mm

CODE	lenght L mm	kg 1 pcs.	catalogue no.	MOQ pcs.	pcs.	
BDFTH120/6NMC	6018	25,98	863461	1	50	ST
BDFTH120/6,4NMC	6426	27,74	863464	1	50	ST
BDFTH120/6,8NMC	6834	29,50	863468	1	1	STM

Advantages:
- extended perforation in the upper part allows for the Installation of panels of various dimensions without the need to drill additional holes in the profile
- quick Installation of BDF...H120 angled profiles with CWC100H50 channels (purlins) thanks to the extension of the upper part of the angled profiles up to 50 mm and shifting of the holes, which enables a convenient approach from below with a socket wrench and a screw gun
- dense and enlarged perforation in the side enables the Installation of structure within the angle range of 20-35 degrees
- perforation in the lower part allows the bracing profiles to be screwed on without the need to use additional elements
- made of Magnelis®-coated material with very high corrosion resistance

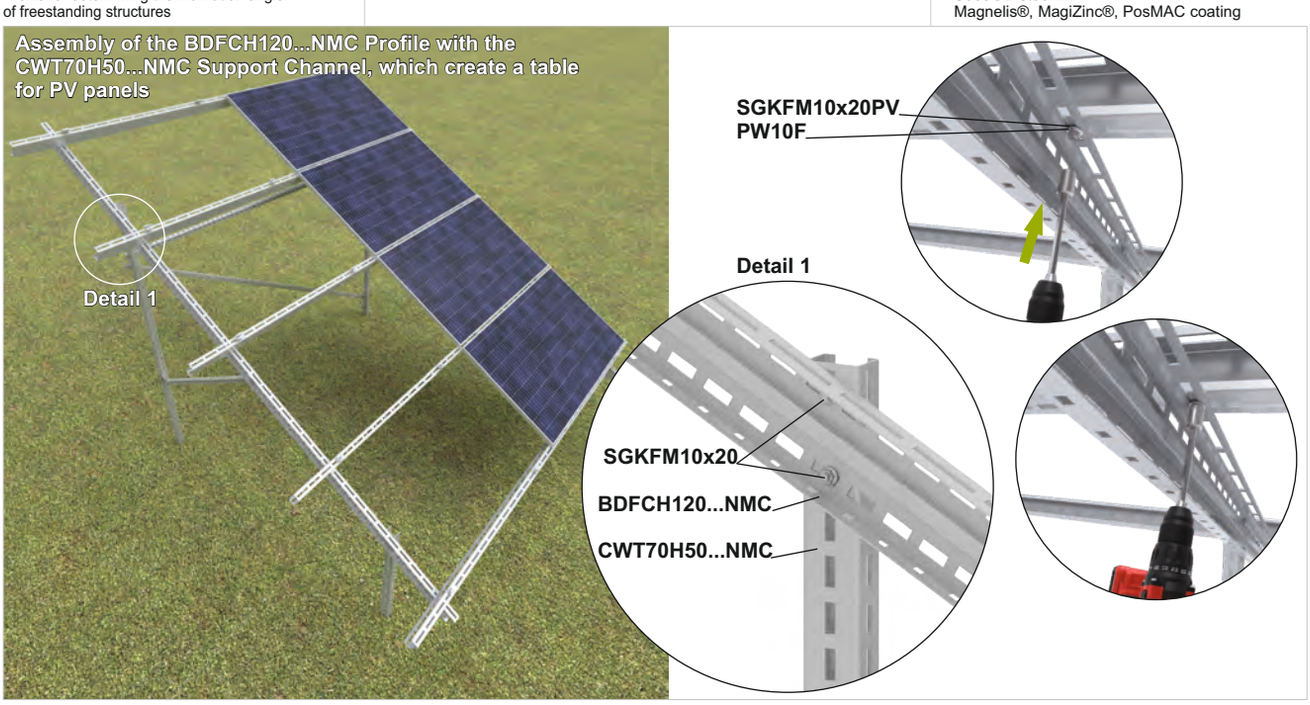
For the assembly use SGKFM10x20PV Screw Sets

STM
ST



MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Note: orders for PV farms ≥0.5 MW delivered in collective packages

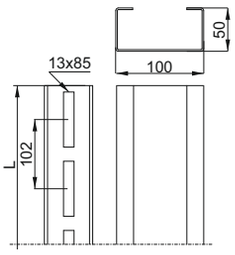


STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Support Channel

CWC100H50...NMC



CWC100H50...NMC

≠ 2,0 mm

CODE	lenght L mm	1 pcs. kg	catalogue no.	MOQ pcs.	
CWC100H50/3,3NMC	3264	9,96	867633	1	STM
CWC100H50/4,4NMC	4386	13,38	867644	1	STM
CWC100H50/6,6NMC	6630	20,23	867566	50	ST

Advantages:
- extended and condensed perforation allows panels of different sizes to be assembled without drilling additional holes in the profile
- extended perforation allows for the use of quick fit channel nuts
- identical size of perforation in both walls allows assembly in any position

For the assembly use SGKFM10x20PV Screw Sets

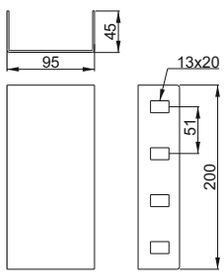
STM
ST

APPLICATION
Direct support of panels and mounting of panel fixing holders

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Channel Connector

LCTW100H50MC



LCTW100H50MC

≠ 2,0 mm

CODE	1 pcs. kg	catalogue no.	pcs.	
LCTW100H50MC	0,53	856105	10	

Advantages:
- mounting from the inside of CWC100H50...NMC channels does not cause any collision with a panel placed on the external side of the channel
- Installation of screws only in one wall

For the assembly use 4 x SGKFM10x20PV Screw Sets

N
STM

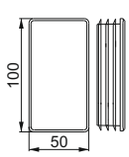
APPLICATION
Connecting the CWC100H50...NMC Support Channels

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Note: orders for PV farms ≥0.5 MW delivered in collective packages

Protection Cap

NOW100x50SR



NOW100x50SR

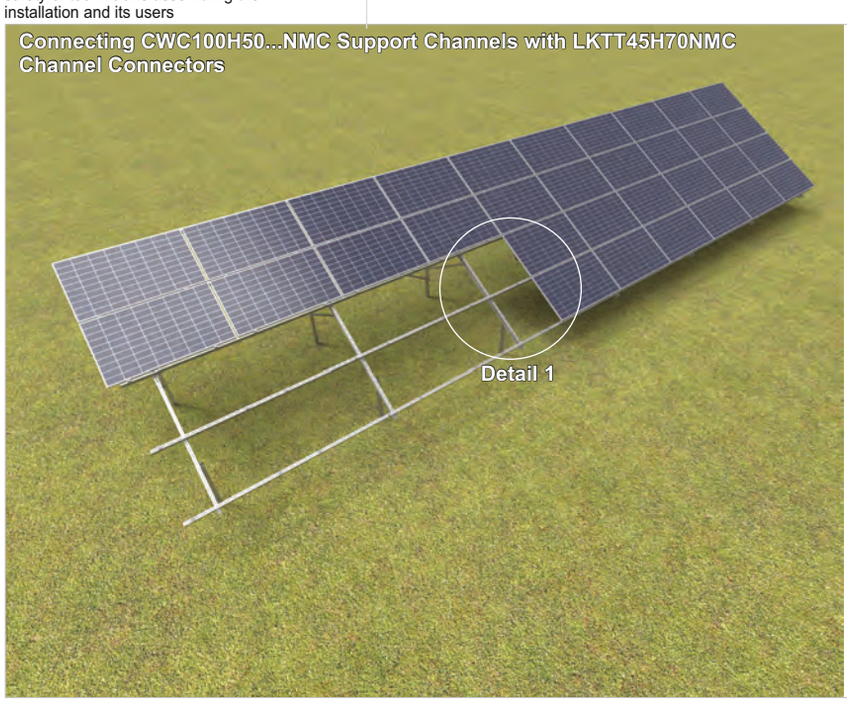
CODE	catalogue no.	pcs.
NOW100x50SR	890504	100

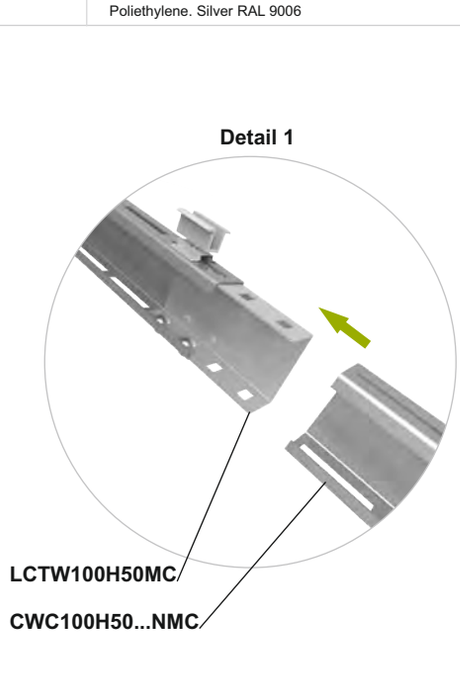
Advantages:
- improving the aesthetics of PV installations
- improving the safety of technicians during installation
- improving user safety

N
STM

ZASTOSOWANIE
Protective caps for CWC100H50 / ... NMC profiles for free-standing structures. Caps do improve the aesthetics of the structure and safety of technicians assembling the installation and its users

MATERIAL
Poliethylene. Silver RAL 9006



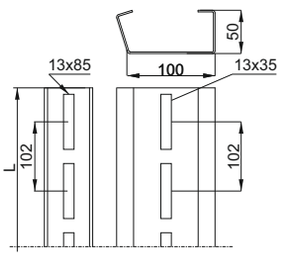


STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Support Channel

CWCR100H50...MC



APPLICATION
Load-bearing structure element - vertical support posts for free-standing structures

CWCR100H50...MC

≠ 2,0 mm

CODE	lenght L mm	kg 1 pcs.	catalogue no.	MOQ pcs.		
CWCR100H50/3,3MC	3264	9,96	881533	4	1	STM
CWCR100H50/4,4MC	4386	13,38	881544	4	1	STM
CWCR100H50/6,6MC	6630	20,23	881566	4	50	ST

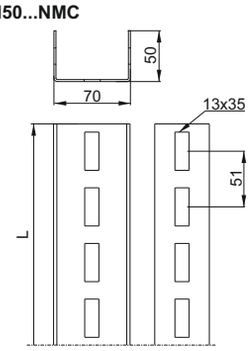
Advantages:
- elongated and thickened perforation allowing assembly of the panels of various dimensions without the need for drilling additional holes in the channel
- widened perforation allows for the use of quick assembly rhombic nuts
- one side bent at an obtuse angle to provide mounting 25 degree angle without the need for additional assembly elements

For the assembly use SGKFM10x20PV Screw Sets

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Channel

CT70H50...NMC



APPLICATION
Load-bearing structure element - vertical support posts for free-standing structures

CT70H50...NMC

≠ 3,0 mm

CODE	lenght L mm	kg 1 pcs.	catalogue no.	MOQ pcs.		
CT70H50/1NMC	1020	3,20	864510	4	50	ST
CT70H50/2NMC	1989	6,25	864520	4	1	STM
CT70H50/3NMC	3009	9,45	864530	4	1	STM
CT70H50/4NMC	3978	12,49	864540	4	1	STM

Advantages:
- dense perforation enables the levelling of unevenness created during the assembly of the structure in inhomogeneous ground and enables the assembly of the structure with a slightly changed angle of inclination
- made of Magnelis®-coated material with very high corrosion resistance
- enlarged and condensed perforation matched to the BDFCH profiles, so as to enable Installation of structure within the range of 20-35 degrees of inclination of the panels in relation to the ground
- better blocking of the SGKFM10x20PV locking screws (with mushroom heads) due to the change of the oval holes in to rectangular

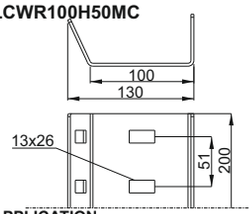
For the assembly use SGKFM10x20PV Screw Sets

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Note: orders for PV farms ≥0.5 MW delivered in collective packages

Channel Connector

LCWR100H50MC



APPLICATION
Connecting the CWCR100H50...MC Support Channels

LCWR100H50MC

≠ 2,0 mm

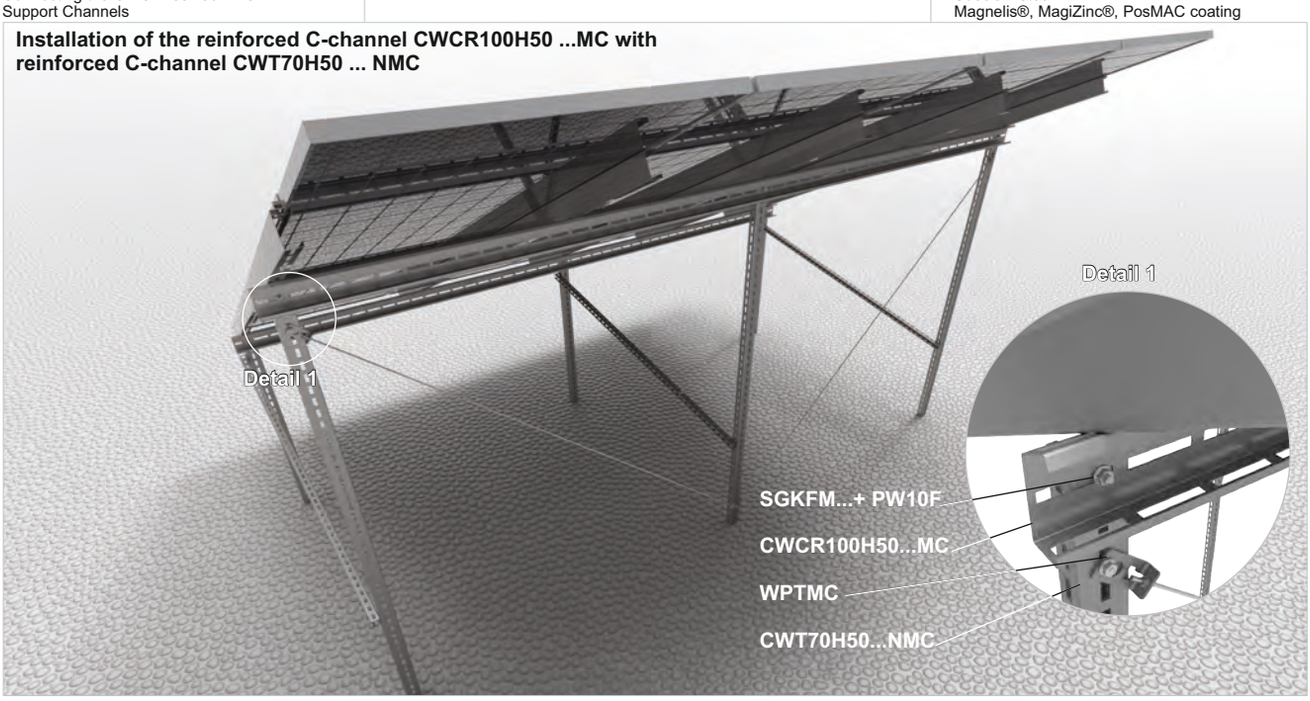
CODE	kg 1 pcs.	catalogue no.	pcs.
LCWR100H50MC	0,54	856106	10

Advantages:
Installation of the reinforced C-channel CWCR100H50 ...MC with reinforced C-channel CWT70H50 ... NMC

For the assembly use 4 x SGKFM10x20PV Screw Sets

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Installation of the reinforced C-channel CWCR100H50 ...MC with reinforced C-channel CWT70H50 ... NMC

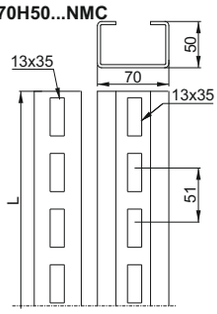


STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Support Channel

CWT70H50...NMC



CWT70H50...NMC

≠ 3,0 mm

CODE	lenght L mm	kg 1 pcs.	catalogue no.	MOQ pcs.		
CWT70H50/1NMC	1020	3,73	867810	4	50	ST
CWT70H50/2NMC	1989	7,27	867820	4	1	STM
CWT70H50/2,4NMC	2397	9,18	867824	4	50	ST
CWT70H50/3NMC	3009	11,00	867830	4	1	STM
CWT70H50/3,2NMC	3213	11,74	867832	4	1	STM
CWT70H50/3,4NMC	3413	12,48	867834	4	1	STM
CWT70H50/4,4NMC	4386	16,03	867844	4	1	STM

Advantages:
- increased tolerance of depth of insertion of support posts into the ground and easier levelling of panels due to extension of holes to 35 mm
- better blocking of the SGKFM10x20PV locking screws (with mushroom heads) due to the change of the oval holes into rectangular
- enlarged and condensed perforation matched to the BDFCH profiles, so as to enable Installation of structure within the range of 20-35 degrees of inclination of the panels in relation to the ground
- made of Magnelis®-coated material with very high corrosion resistance

For the assembly use SGKFM10x20PV Screw Sets

STM
ST

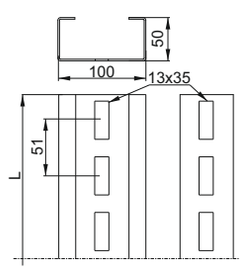
APPLICATION
Load-bearing structure element - vertical support posts for free-standing structures

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Note: orders for PV farms ≥0.5 MW delivered in collective packages

Support Channel

CWE100H50...NMC



CWE100H50...NMC

≠ 4,0 mm

CODE	lenght L mm	kg 1 pcs.	catalogue no.	MOQ pcs.		
CWE100H50/1,5NMC	1479	8,22	865115	8	50	ST
CWE100H50/3,2NMC	3213	17,85	865132	8	1	STM
CWE100H50/3,6NMC	3621	20,12	865136	8	1	STM

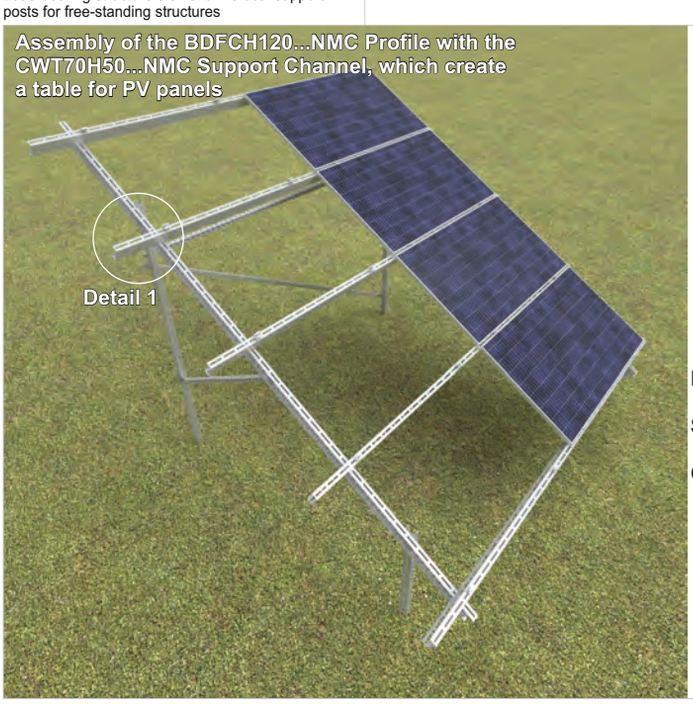
Advantages:
- dense perforation enables the levelling of unevenness created during the assembly of the structure in inhomogeneous ground and enables the assembly of the structure with a slightly changed angle of inclination
- made of Magnelis®-coated material with very high corrosion resistance
- better blocking of the SGKFM10x20PV locking screws (with mushroom heads) due to the change of the oval holes into rectangular

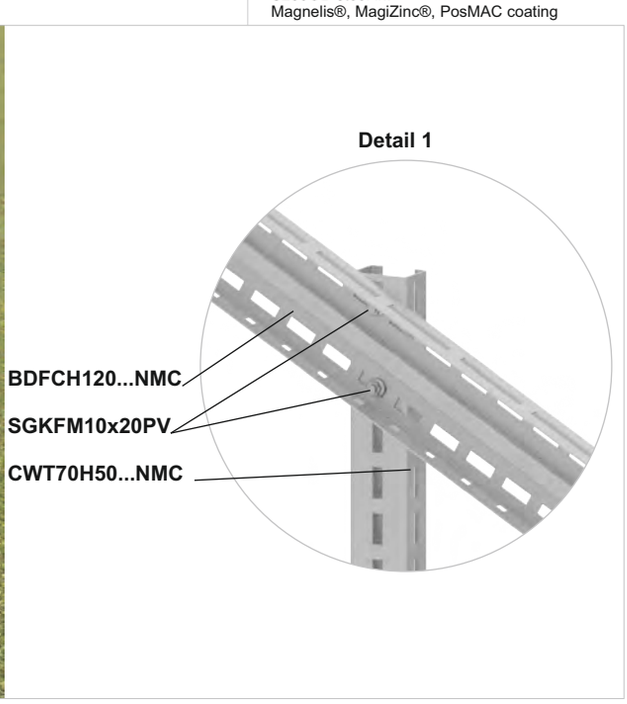
For the assembly use SGKFM10x20PV Screw Sets

STM
ST

APPLICATION
Load-bearing structure element - vertical support posts for free-standing structures

MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating



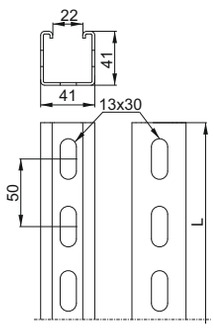


STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Mounting Channel

CMP41H41...MC



APPLICATION
Load-bearing structure element for flat roofs, bracing of freestanding structures

CMP41H41...MC

≠ 1,5 mm

CODE	lenght L mm	1 pcs. kg	catalogue no.	MOQ pcs.	
CMP41H41/1MC	1000	1,70	856210	8	1
CMP41H41/1,2MC	1200	2,03	856211	8	1
CMP41H41/1,5MC	1500	2,55	856215	8	1
CMP41H41/1,7MC	1700	2,89	851117	8	1
CMP41H41/2MC	2000	3,40	851120	8	1
CMP41H41/2,2MC	2200	3,74	851122	8	1
CMP41H41/2,5MC	2500	4,23	851125	8	1
CMP41H41/3MC	3000	3,96	851132	8	1
CMP41H41/3,5MC	3500	5,95	851135	8	1
CMP41H41/3,7MC	3700	6,29	852137	8	1
CMP41H41/6MC	6000	7,92	851162	8	1

Advantages:
- **producted in various lengths, which significantly extends the Installation possibilities**
- **a "double bend" on the open side of the channel section, which provides additional strength and stiffness to the element**
- **made of steel in Magnelis® coating with very high corrosion resistance**

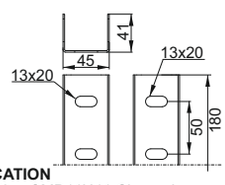
For the assembly use SGKFM10x20PV Screw Sets

STM

MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Channel Connector

LC41H41MC



APPLICATION
Connecting CMP41H41 Channels

LC41H41MC

≠ 1,5 mm

CODE	1 pcs. kg	catalogue no.	pcs.
LC41H41MC	0,30	851541	50

Advantages:
- **perforation in 3 sides allows different variants of screw placement**
- **made of steel in Magnelis® coating with very high corrosion resistance**

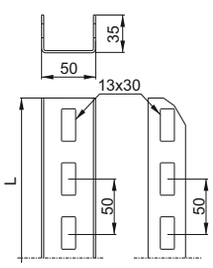
For the assembly use 4 x SGKFM10x20PV Screw Sets

STM

MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Channel

CCS50H35/...MC



APPLICATION
Creation of triangular structures for flat roofs

CCS50H35/...MC

≠ 2,0 mm

SYMBOL	lenght L mm	1 pcs. kg	catalogue no.	pcs.
CCS50H35/1,3MC	1300	2,28	895413	1
CCS50H35/1,4MC	1400	2,45	895414	1

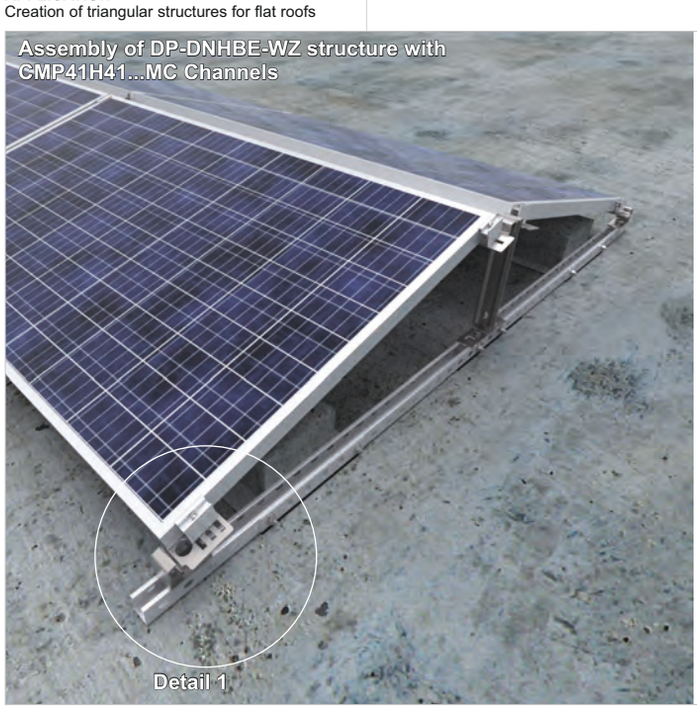
Advantages:
- **made of steel in Magnelis® coating with very high corrosion resistance**
- **quick creation of triangular structures on flat roofs**

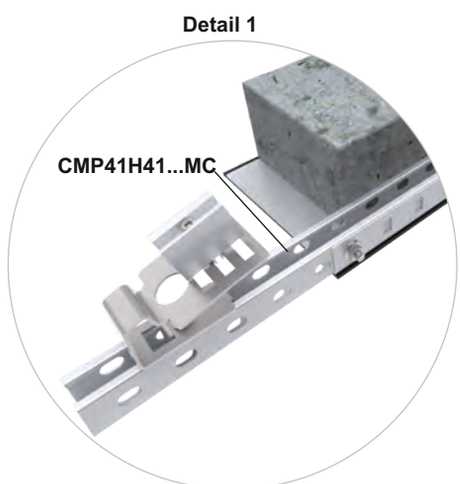
For the assembly use SGKFM10x20PV Screw Sets

ST

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Note: orders for PV farms ≥0.5 MW delivered in collective packages



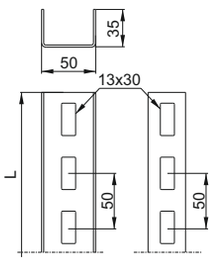


STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Channel

C...50H35...MC



APPLICATION
Creation of triangular structures for flat roofs

CP50H35...MC

≠ 1,5 mm

SYMBOL	lenght L mm	1 pcs. kg	catalogue no.	pcs.	MOQ pcs.
CP50H35/0,3MC	300	0,33	895603	1	1
CP50H35/0,45MC	450	0,49	895604	1	1
CP50H35/0,55MC	550	0,60	895605	1	1
CP50H35/1,5MC	1500	1,62	895615	1	1

CC50H35...MC

≠ 2,0 mm

SYMBOL	lenght L mm	1 pcs. kg	catalogue no.	pcs.	MOQ pcs.
CC50H35/0,3MC	300	0,52	895230	1	1
CC50H35/0,45MC	450	0,78	895345	1	1
CC50H35/0,55MC	550	0,96	895255	1	1
CC50H35/0,85MC	850	1,48	895385	1	1
CC50H35/1MC	1000	1,75	895335	1	1
CC50H35/1,15MC	1150	2,00	895325	1	1
CC50H35/1,5MC	1500	2,62	895355	1	1
CC50H35/1,7MC	1700	2,97	895375	1	1
CC50H35/2,2MC	2200	3,85	895322	1	1
CC50H35/3,3MC	3300	5,77	895333	1	1

Advantages:
- made of steel in Magnelis® coating with very high corrosion resistance
- quick creation of triangular structures on flat roofs

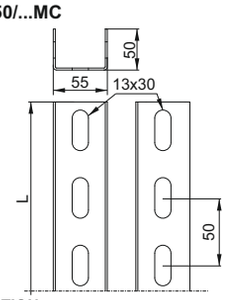
For the assembly use SGKFM10x20PV Screw Sets

N STM

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Channel

CC55H50/...MC



APPLICATION
Creation of triangular structures for flat roofs

CC55H50/...MC

≠ 2,0 mm

SYMBOL	lenght L mm	1 pcs. kg	catalogue no.	pcs.
CC55H50/0,6MC	600	1,21	895406	1
CC55H50/0,7MC	700	1,42	895407	1
CC55H50/1,55MC	1550	3,03	895525	1
CC55H50/2MC	2000	4,05	895326	1
CC55H50/3MC	3000	6,07	895430	1

Advantages:
- made of steel in Magnelis® coating with very high corrosion resistance
- quick creation of triangular structures on flat roofs

For the assembly use SGKFM10x20PV Screw Sets

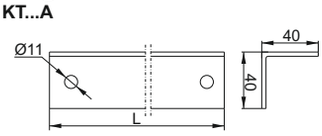
STM

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Note: orders for PV farms ≥0.5 MW delivered in collective packages

Angle Profile

KT...A



APPLICATION
Creation of triangular structures for flat roofs

KT...A

≠ 3,0 mm

SYMBOL	lenght L mm	1 pcs. kg	catalogue no.	pcs.	MOQ pcs.
KT850A	850	1,53	898085	1	1
KT1000A	1000	1,80	898099	1	1
KT1150A	1150	2,01	898115	1	1
KT1700A	1700	3,06	898170	1	1
KT2000A	2000	3,60	898210	1	1
KTST1700A	1700	3,06	898175	1	1

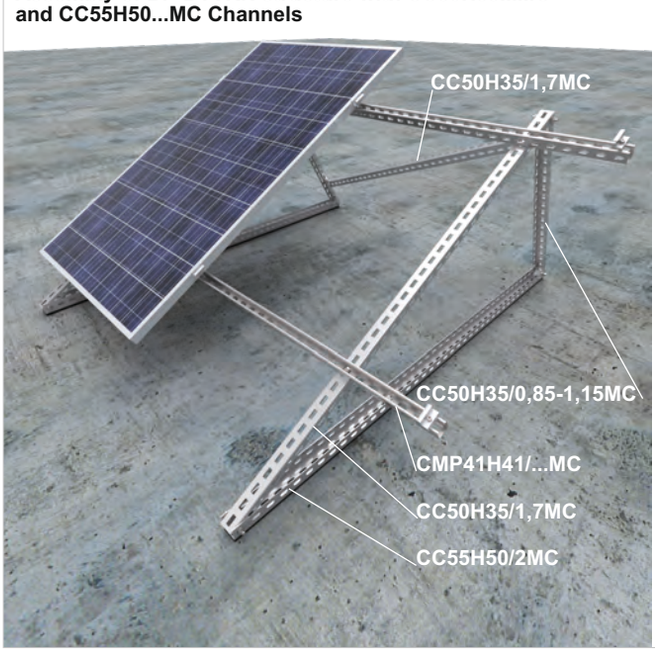
Note:
Perforation suitable for different panel sizes to enable Installation in designated Installation zones on the panel frame.

For the assembly use SSZ10x20E Screws and NKZM10E Nuts.

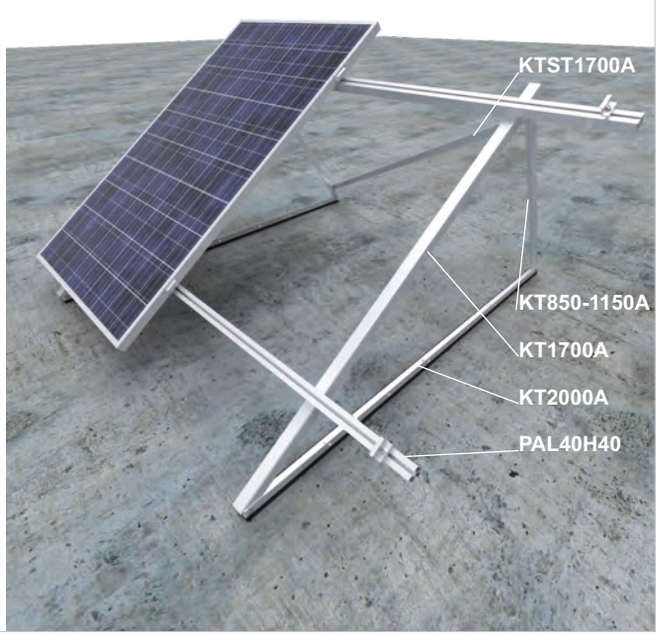
ST

MATERIAL
Aluminium

Assembly of DP-DTVKN structure with CC50H35...MC and CC55H50...MC Channels



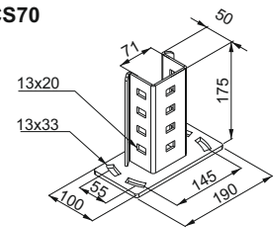
Assembly of DP-DTAVKN structure with KT...A Angle Profiles



STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Base Plate
PCS70



APPLICATION
Assembly of vertical profile CT70H50... and CWT70H50... as a support post of the structure to GSW76x...N ground screw

PCS70

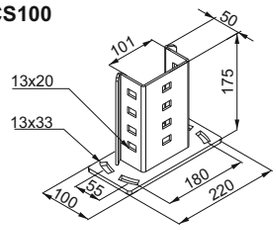
CODE	1 pcs kg	catalogue no.	pcs.
PCS70	1,81	751217	5

Advantages:
- increased strength due to specially shaped reinforcing folds
- holes in the base plate allowing adjustment of the position during assembly

For assembly to:
- ground screw use 4 x SMM10x30F Screw Sets

MATERIAL
S235 steel, hot-dip galvanized acc. to PN-EN ISO 1461:2011

Base Plate
PCS100



APPLICATION
Assembly of vertical profile CWE100H50... as a support post of the structure to GSW76x...N ground screw

PCS100

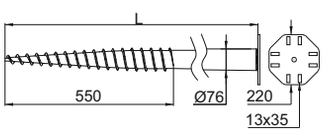
CODE	1 pcs kg	catalogue no.	pcs.
PCS100	2,17	751216	5

Advantages:
- increased strength due to specially shaped reinforcing folds
- holes in the base plate allowing adjustment of the position during assembly

For assembly to:
- ground screw use 4 x SMM10x30F Screw Sets

MATERIAL
S235 steel, hot-dip galvanized acc. to PN-EN ISO 1461:2011

Ground Screw
GSW76x...N



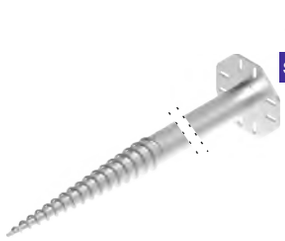
APPLICATION
Assembly of PCS70 and PCS100 base plates

GSW76x...N

CODE	lenght L mm	1 pcs. kg	catalogue no.	pcs.
GSW76x1600N	1600	11,00	897716	1
GSW76x2200N	2200	12,90	897722	1

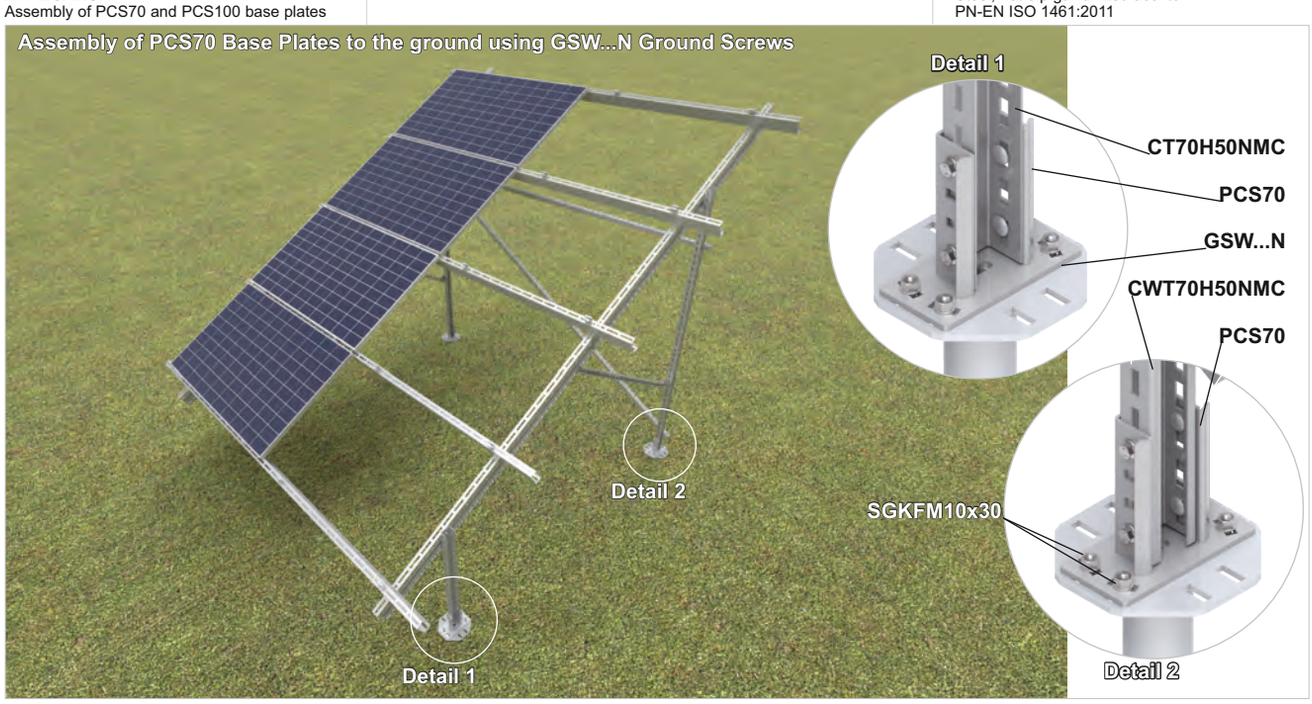
Advantages:
- longitudinal perforation enables screw assembly with PCS70 or PCS100 base plates
- Installation of small and medium-sized freestanding structures without the need for using pile driver
- increased bearing capacity (compaction) of the soil when screwing in the screw
- hot-dip galvanized material for very high corrosion resistance

For the assmebly of a post with ground screw use 4 x SGKFM10x30 Screw Sets



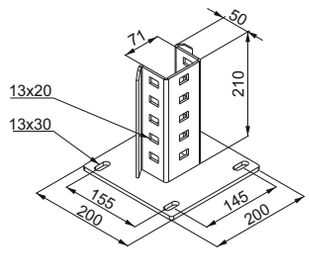
MATERIAL
Steel, hot-dip galvanized acc. to PN-EN ISO 1461:2011

Note: orders for PV farms ≥0.5 MW delivered in collective packages



STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Base Plate
PCB70



PCB70

CODE	1 pcs	catalogue no.	pcs.
PCB70	4,32	751218	5

Advantages:
- increased strength due to specially shaped reinforcing folds
- holes in the base plate allowing adjustment of the position during assembly
- dense perforation in the vertical part allows mounting height adjustment of the support post
- high mounting stability due to the enlarged base plane

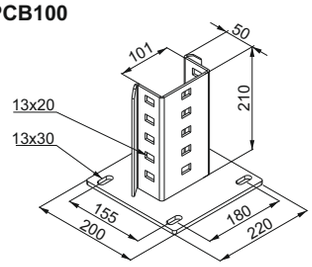
For assembly to:
- concrete foundation use 4 x PSRM10x90F Anchor Bolts

N STM

APPLICATION
Assembly of vertical profile CT70H50... and CWT70H50... as a support post of the structure to concrete foundation

MATERIAL
S235 steel, hot-dip galvanized acc. to PN-EN ISO 1461:2011

Base Plate
PCB100



PCB100

CODE	1 pcs	catalogue no.	pcs.
PCB100	4,87	751219	5

Advantages:
- increased strength due to specially shaped reinforcing folds
- holes in the base plate allowing adjustment of the position during assembly
- dense perforation in the vertical part allows mounting height adjustment of the support post
- high mounting stability due to the enlarged base plane

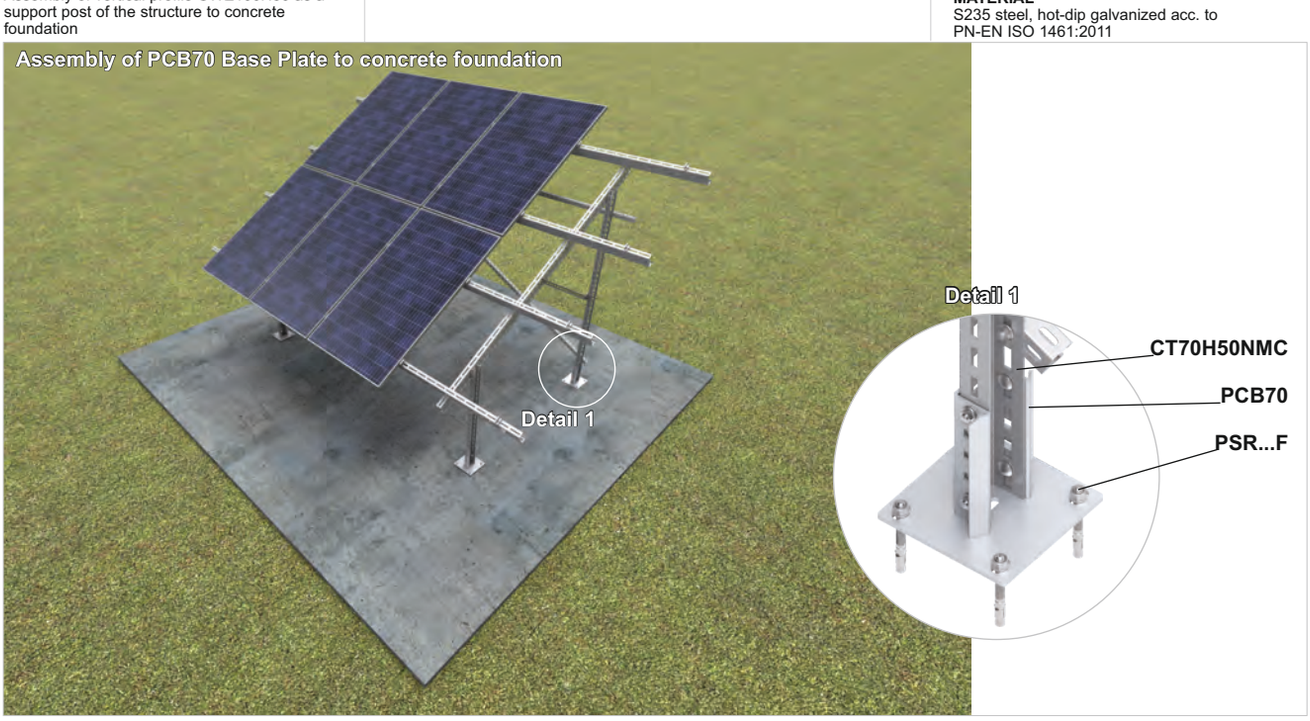
For assembly to:
- concrete foundation use 4 x PSRM10x90F Anchor Bolts

N STM

APPLICATION
Assembly of vertical profile CWE100H50 as a support post of the structure to concrete foundation

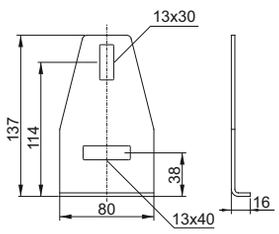
MATERIAL
S235 steel, hot-dip galvanized acc. to PN-EN ISO 1461:2011

Note: orders for PV farms ≥0.5 MW delivered in collective packages



STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Channel Connector
LCJ70MC



LCJ70MC

≠ 3,0 mm

CODE	1 pcs. kg	catalogue no.	pcs.
LCJ70MC	0,18	850251	30

Advantages:
- **longitudinal perforation allows for mounting the element to support posts in the correct position**
- **made of steel in Magnelis® coating with very high corrosion resistance**

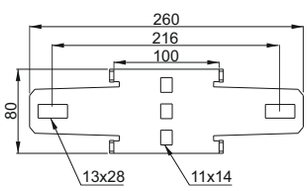
For the assembly use 2 x SGKFM10x20PV Screw Sets

Note: orders for PV farms ≥0.5 MW delivered in collective packages

APPLICATION
Connection of bracings made of CMP... channels with CT70H50...NMC or CWT70H50...NMC vertical support posts of double-supported freestanding structures

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Channel Connector
LCD100MC



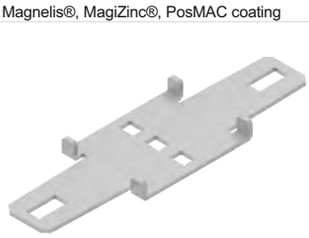
LCD100MC

≠ 4,0 mm

CODE	1 pcs. kg	catalogue no.	pcs.
LCD100MC	0,45	850150	20

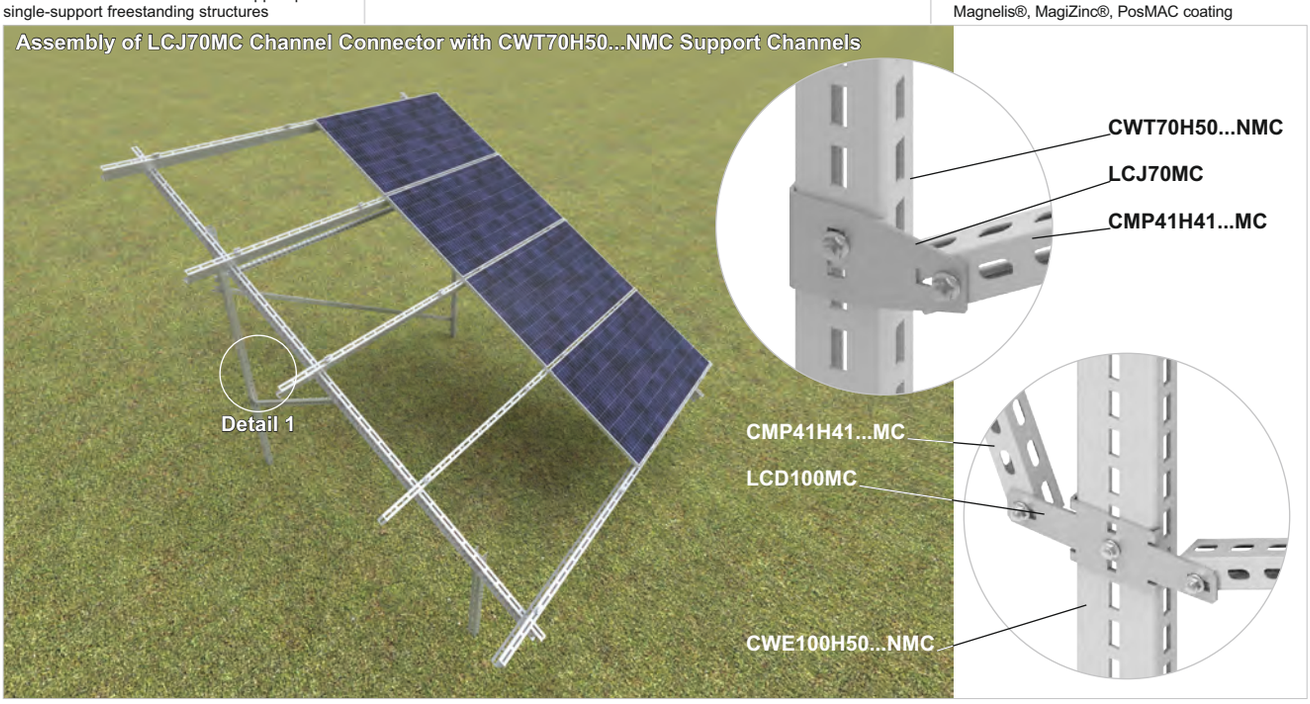
Advantages:
- **longitudinal perforation allows for mounting the element to support posts in the correct position**
- **made of steel in Magnelis® coating with very high corrosion resistance**
- **provides a stable connection between support posts and bracings made of channels**
- **assembly to support post with 1 or 2 screws possible**

For the assembly use 3 x SGKFM10x20PV Screw Sets



APPLICATION
Connection of bracings made of CMP... channels with CWE100H50...NMC vertical support posts of single-support freestanding structures

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

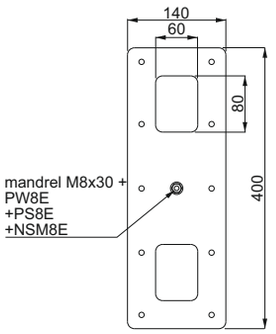


STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Steel Fixing Plate for Flat Roofs

SPM1



APPLICATION
Installation to a flat roof covered with roofing felt or membrane

SPM1

≠ 2,0 mm

CODE	1 pcs	catalogue no.	pcs.
SPM1	0,80	858023	10

Advantages:
- non-invasive Installation to roofs covered with roofing felt or membrane
- geometry and load capacity adapted to the BAKS structures
- low weight, which does not overload the roof
- the set includes an enlarged washer, a spring washer and a stainless steel nut
- threaded mandrel M8x30 permanently fixed to the plate

Attention.
Minimum patch size for SPM1 fixing plates:
- for roofing felt: 500 x 1000 mm
- membrane: 300 x 700 mm

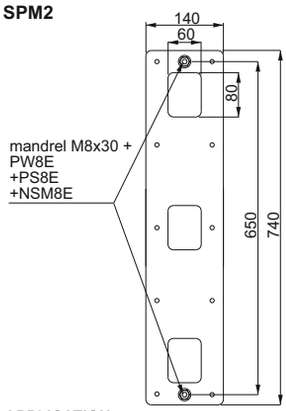
Note:
Installation instructions of the plate for flat roof can be found on the website www.baks.com.pl/en/

N STM

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Steel Fixing Plate for Flat Roofs

SPM2



APPLICATION
Installation to a flat roof covered with roofing felt or membrane

SPM2

≠ 2,0 mm

CODE	1 pcs	catalogue no.	pcs.
SPM2	1,50	858024	10

Advantages:
- non-invasive Installation to roofs covered with roofing felt or membrane
- geometry and load capacity adapted to the BAKS structures
- low weight, which does not overload the roof
- the set includes 2 enlarged washers, 2 spring washers and 2 stainless steel nuts
- threaded mandrel M8x30 permanently fixed to the plate

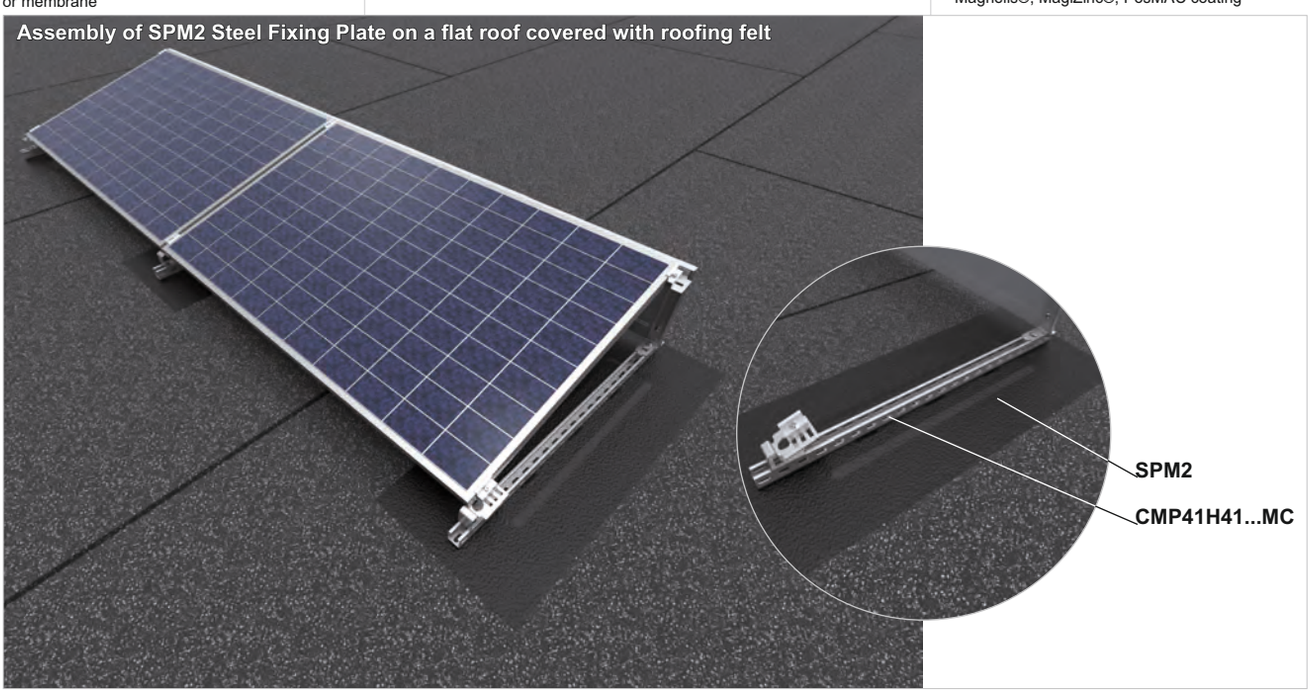
Attention.
Minimum patch size for SPM2 fixing plates:
- for roofing felt: 500 x 1200 mm
- membrane: 300 x 1000 mm

Note:
Installation instructions of the plate for flat roof can be found on the website www.baks.com.pl/en/

N STM

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

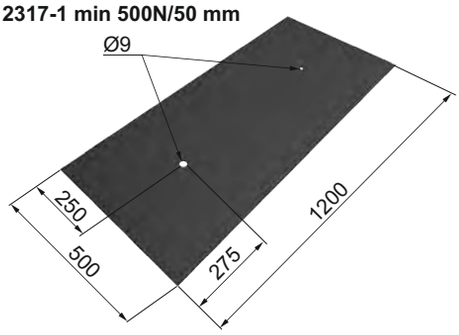
Note: orders for PV farms ≥0.5 MW delivered in collective packages



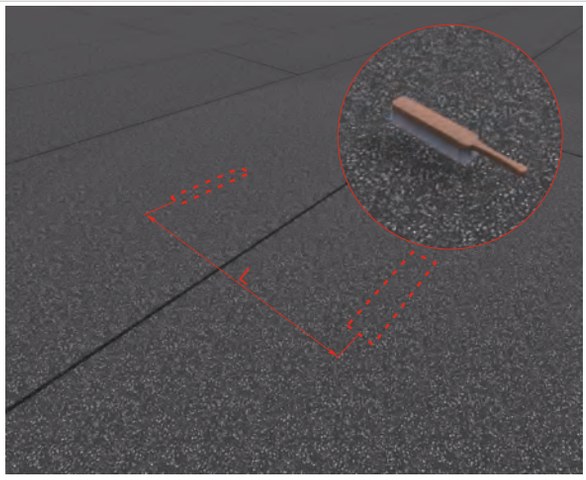
STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

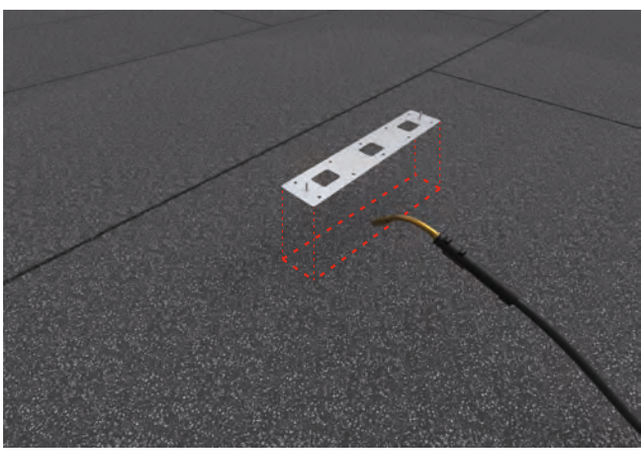
Assembly instructions for SPM2 Steel Fixing Plate to roofing felt
Note:
Requirements of the roofing felt to be used:
1) EN 12310-1 min 150N
2) EN 12311-1 min 300N/50 mm
3) EN 12316-1 min 125N/50 mm
4) EN 12317-1 min 500N/50 mm



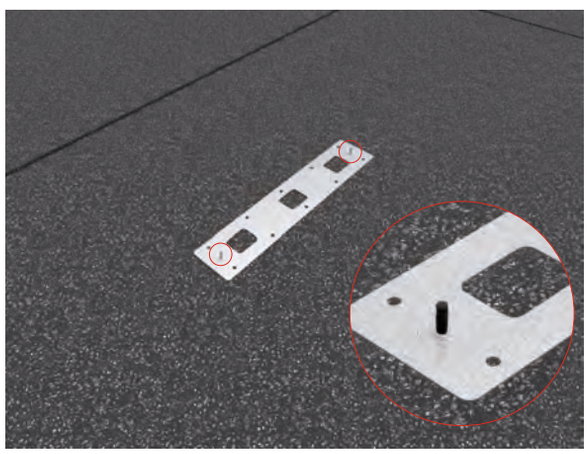
1. Before starting to inSteell the SPM2 plates, cut out a fragment of roofing felt with minimum dimensions of 500 x 1200 mm, then cut out holes with a diameter of Ø9 mm in the locations of screws



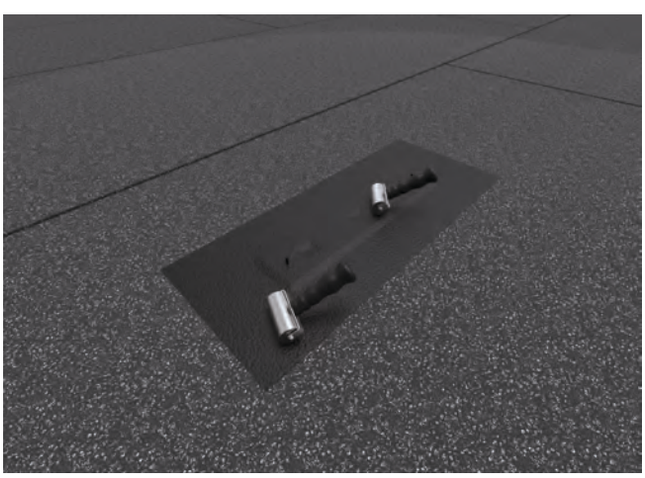
2. Measure the distance between the SPM2 plates, mark the points and then use a wire brush to clean the 500 x 1200 mm area of the roofing felt on the roof



3. On the designated area heat the surface in the size of a plate or slightly larger

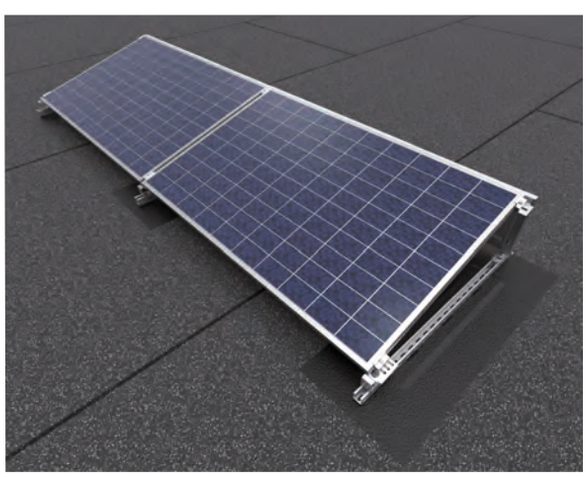


4. SPM2 plate should be placed on heated areas, pressed against prepared surface, protruding threads should be secured with NOP50 protection cap



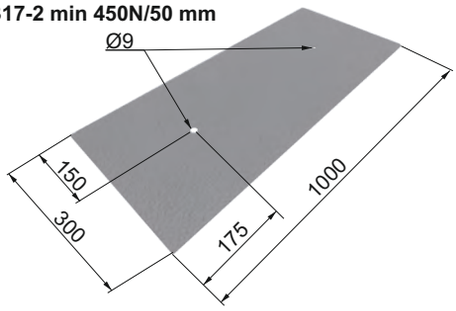
5. Warm up the prepared roofing felt, cover the plate with it and then press it with a roofing roller in the locations of the holes

6. Warm up the side of the roofing felt and the surface and at the same time press the roofing felt with a roofing roller, repeat the operation for each side until the plate is fully fixed to the roof surface

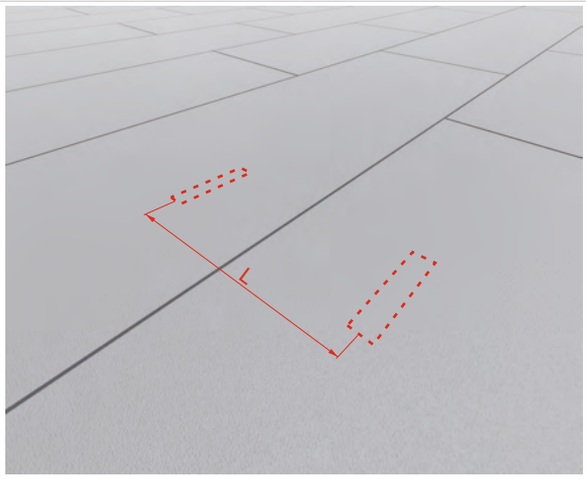


7. Correctly installed structure using SPM2 plate and DP-DNHWE mounting system

Assembly instructions for SPM2 Steel Fixing Plate to membrane
Note:
Requirements of the membrane to be used: PVC, ECB, EPO min 1.2 mm thick:
1) EN 12310-2 min 110N
2) EN 12311-2 min 500N/50 mm
3) EN 12316-2 min 150N/50 mm
4) EN 12317-2 min 450N/50 mm



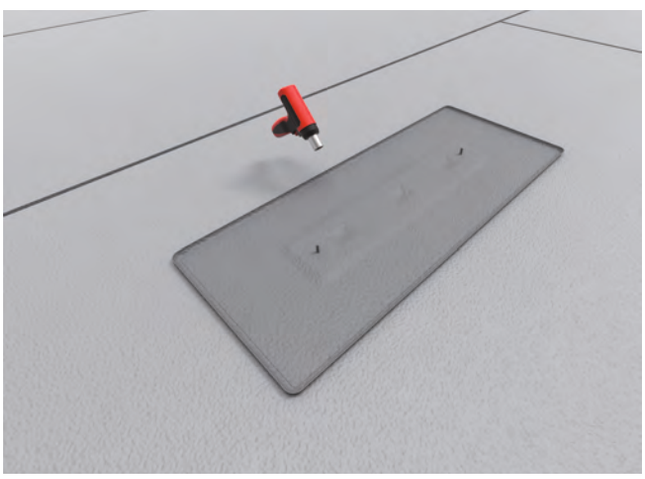
1. Before starting to inSteell the SPM2 plates, cut out a fragment of membrane with minimum dimensions of 300 x 1000 mm, then cut out holes with a diameter of Ø9 mm in the locations of screws, finally round the corners of the membrane.



2. Measure the distance between the SPM2 plates, then mark the points.

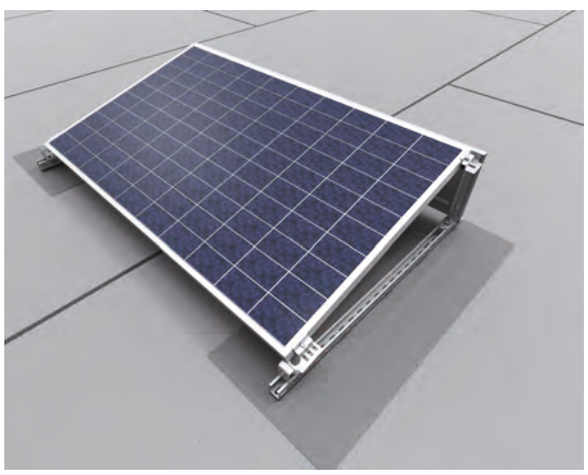
3. Place the SPM2 plate on the designated place

4. Cover the SPM2 plate with the prepared membrane and start the installation with a manual welding machine. Initially weld an hole of 60 x 80 mm, after proper heating press the membrane with a roofing roller. Repeat for the remaining holes.



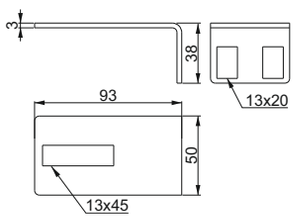
5. Once the holes are welded, weld all sides around the SPM2 plate.

6. The SPM2 plate glued to the membrane is a basis for a structure for PV Installations.



7. Correctly installed structure using SPM2 plate and DP-DNHWE mounting system

Connector
LCCNMC



APPLICATION
Assembly CWC100H50...MC profile to BDFCH120...MC profiles when the Installation place does not coincide with the factory perforation

LCCNMC

≠ 3,0 mm

CODE	1 pcs	catalogue no.	pcs.
LCCNMC	0,08	858022	50

Advantages:
- **longitudinal perforation allows for mounting the element in the correct position**
- **made of steel in Magnelis® coating with very high corrosion resistance**
- **allows to connect the profiles without drilling**

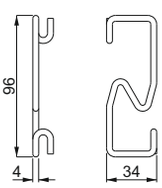
For the assembly use 3 x SGKFM10x20PV Screw Sets

N STM

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Note: orders for PV farms ≥0.5 MW delivered in collective packages

Wire Clip
SPV



APPLICATION
Protection against falling out of cables routed inside of CWC100H50...MC or CWC100H50...NMC channel

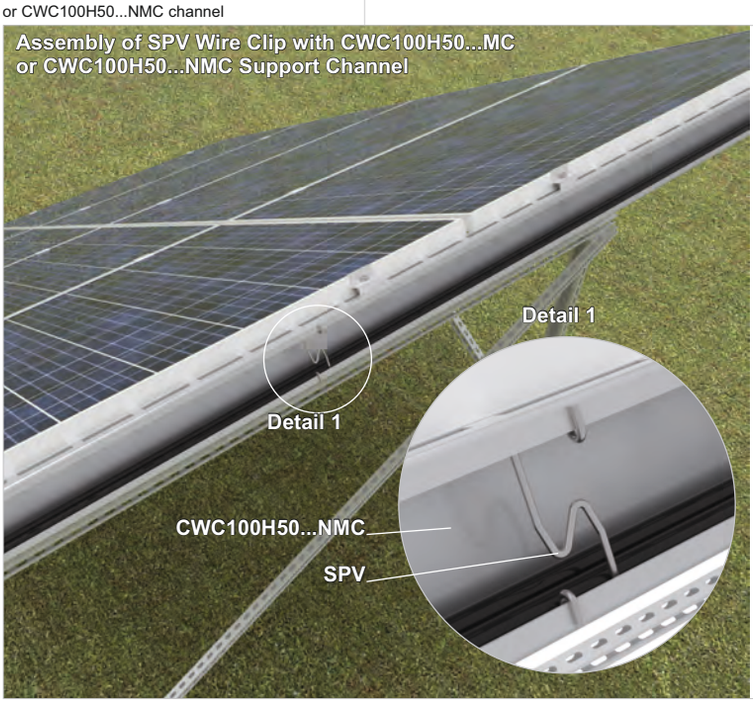
SPV

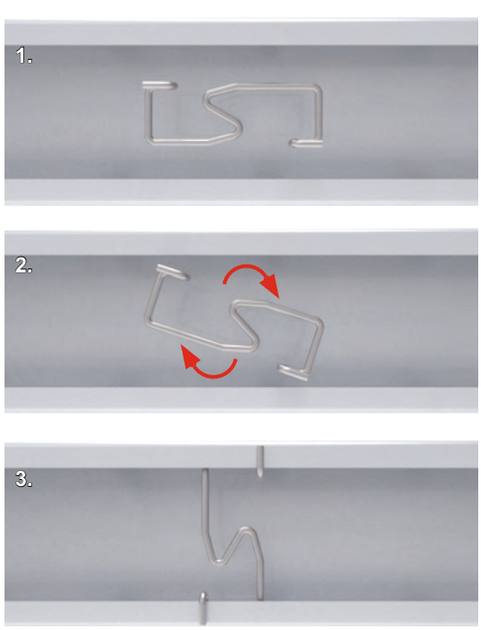
CODE	1 pcs	catalogue no.	pcs.
SPV	0,03	864205	100

Advantages:
- **very quick Installation and removal of the clip, allowing cables to be added at any time**
- **the round cross-section of the clip protects the cables from damage**
- **low weight allowing to carry a large number of pieces by one inSteeller**
- **made of stainless steel with very good anti-corrosion properties and high mechanical strength**
- **Installation possible anywhere in CWC100H50...NMC channel**

N STM

MATERIAL
Stainless steel

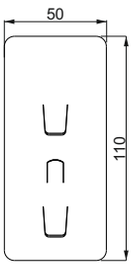




STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 1,2 1,5 2,0 3,0 4,0

Channel base with vibro-insulating rubber
PCSBV



APPLICATION
The stand separates the load-bearing profile of the structure for a flat roof from the roof sheathing preventing damage to the sheathing during assembly and operation of the structure.

PCSBV

CODE	1 pcs kg	catalogue no.	pcs.
PCSBV	0,2	858431	10

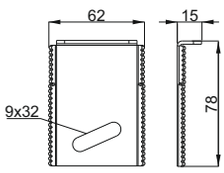
Advantages:
- easy and screwless installation
- the stand is equipped with vibration insulating rubber
- made of steel with Magnelis® coating with very high corrosion resistance

N
STM

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Note: orders for PV farms ≥0.5 MW delivered in collective packages

Clamp
BUFMC



APPLICATION
Assembly of PV panels to channels CC50H35...MC

BUFMC
≠ 2,0 mm

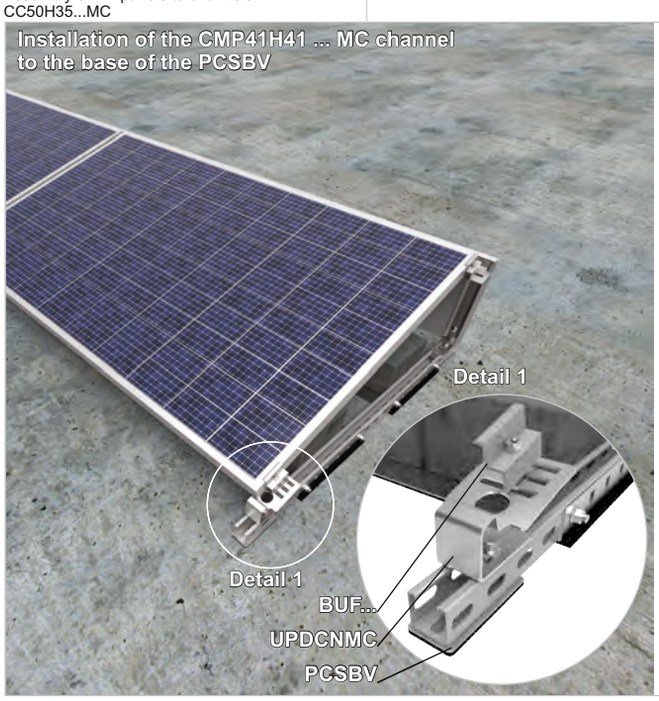
CODE	1 pcs kg	catalogue no.	pcs.
BUFMC	0,09	897334	10

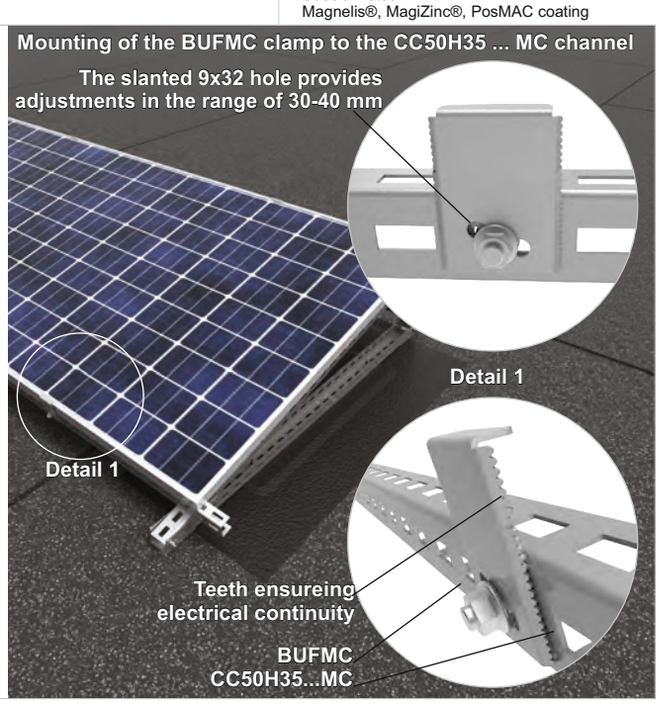
Advantages:
- an oblique opening 9x32 allows the installation of panels with a height of the frame in the range of 30-40 mm
- quick assembly thanks to the use of a screw with a rhombus nut, which locks in the CC50H35MC channel
- thanks to the side bends, the clamp ensures continuity between the panel frame and the structure

For the assembly use 4 x SGKFM10x20PV Screw Sets

N
ST

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating



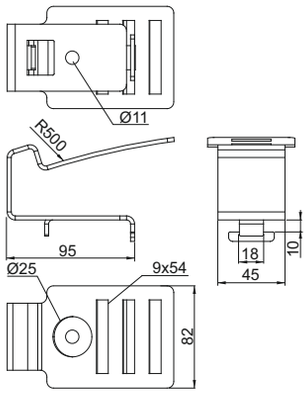


STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Panel's Bottom Holder

UPDCNMC



APPLICATION
Installation of PV panels on flat roofs

UPDCNMC

≠ 3,0 mm

CODE	PV panel inclination angle	1 pcs kg	catalogue no.	pcs.	
UPDCNMC	10°,15°, 20°	0,37	857006	30	

Advantages:
- longitudinal holes for mounting the panels give the possibility of shifting in case of unevenness of the substrate to which the structure is mounted
- possibility to configure the structure east-west
- allows smooth adjustment of the spacing of the panel holders
- holder fixed to channel by one screw with a channel nut
- easy and quick assembly
- high strength parameters
- high quality and aesthetic design
- universal holder for 3 panel fixing angles

For the assembly use 1 x SRM10x30F Screw Set

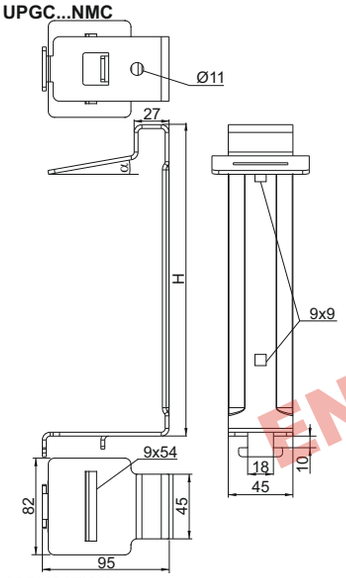
New type holder!

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Note: orders for PV farms ≥0.5 MW delivered in collective packages

Panel's Top Holder

UPGC...NMC



APPLICATION
Installation of PV panels on flat roofs

UPGC...NMC

≠ 3,0 mm

CODE	dimension H mm	PV panel inclination angle α	1 pcs kg	catalogue no.	MOQ pcs.		
UPGC10NMC	241	10°	0,70	858011	12	1	STM
UPGC15NMC	323	15°	0,90	858018	10	1	STM
UPGC20NMC	415	20°	1,10	858223	8	1	STM

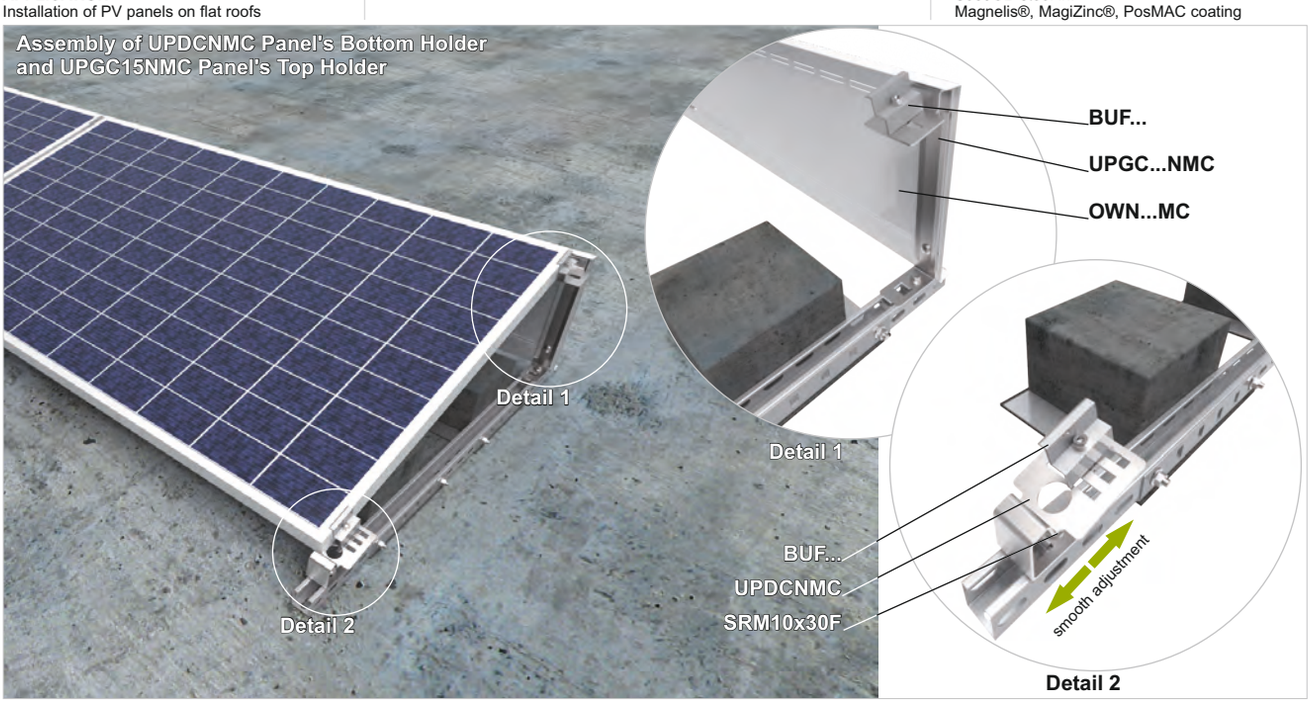
Advantages:
- longitudinal holes for mounting the panels give the possibility of shifting in case of unevenness of the substrate to which the structure is mounted
- possibility to configure the structure east-west or to use wind shields
- allows smooth adjustment of the spacing of the panel holders
- holder fixed to channel by one screw with a channel nut
- easy and quick assembly
- high strength parameters
- high quality and aesthetic design

For the assembly use 1 x SRM10x30F Screw Set

Attention!
Handles will be replaced by UPGGC...MC handles

END OF PRODUCTION 31.12.2022

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

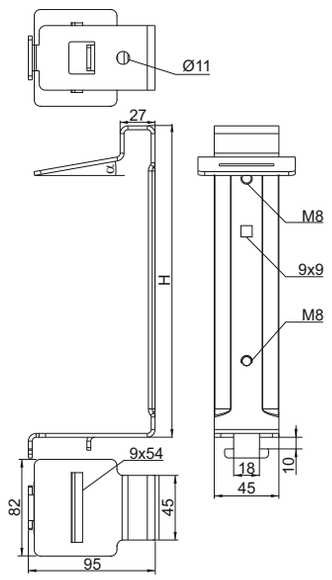


STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Panel's Top Holder

UPGGC...MC



UPGGC...MC

≠ 3,0 mm

CODE	dimension H mm	PV panel inclination angle α	1 pcs kg	catalogue no.	pcs.	MOQ pcs.
UPGGC10MC	241	10°	0,70	**878010**	12	1
UPGGC15MC	323	15°	0,90	**878015**	10	1
UPGGC20MC	415	20°	1,10	**878020**	8	1

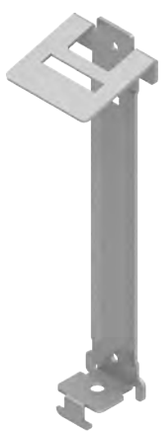
Advantages:
- **M8 threaded holes in the back of the bracket enable trouble-free installation of wind shields**
- **for east-west construction we use SSZ8x12E for the threaded holes**
- **9x9 hole allows connection of UPGGC...MC top brackets using SMM8x..F screw in case of using the structure in an east-west arrangement**
- **longitudinal holes for mounting panels provide the possibility of movement in case of unevenness of the substrate to which structure is mounted**
- **possibility to configure the structure east-west or use of wind shields**
- **allows infinite adjustment of the spacing of the brackets for the panel**
- **mounting of the holder to the channel with a single screw with a diamond nut**
- **easy and quick assembly**
- **high strength parameters**
- **high quality and aesthetics of workmanship**

To install the bracket to the channel, use 1 set of SRM10x30F screws

To mount the wind shield to the bracket, use 2 pcs. SSZ8x12E + PW8E + PS8E

Attention!
The holder replaces the UPGC...MC holder

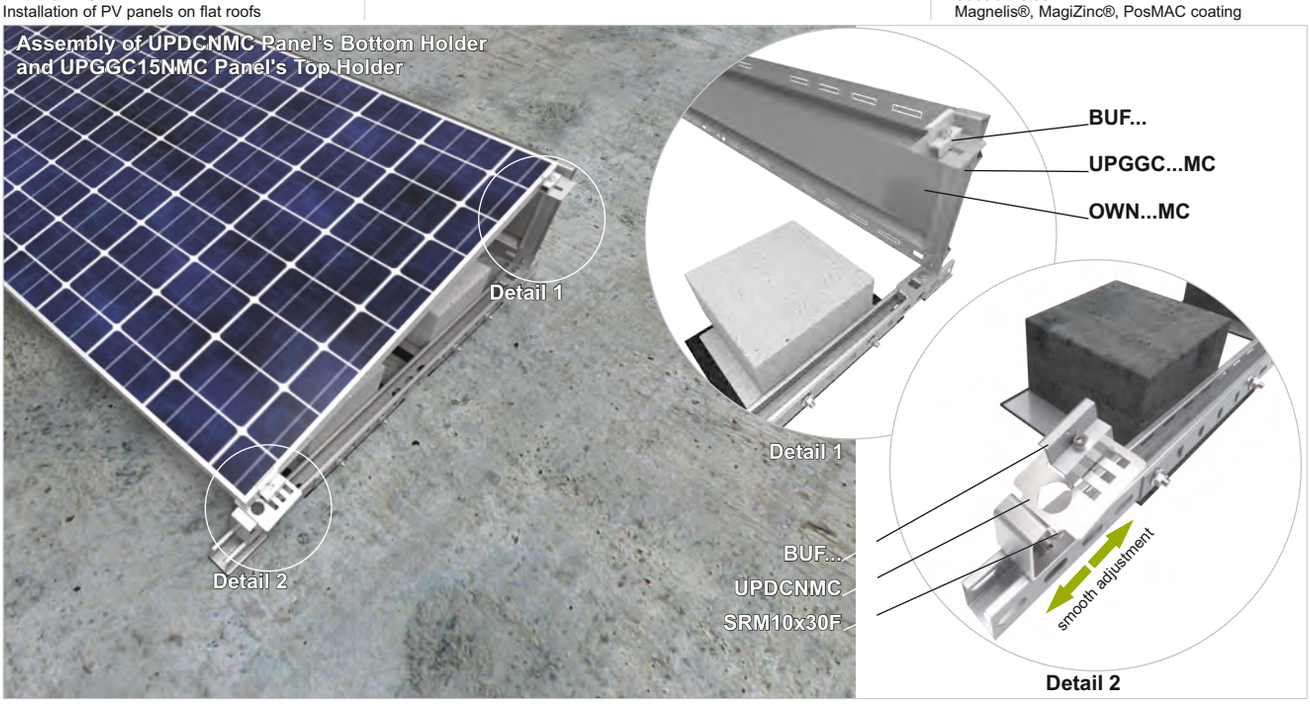
Note: orders for PV farms ≥0.5 MW delivered in collective packages



New type holder!

APPLICATION
Installation of PV panels on flat roofs

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating



STM - Standard stock product (available in stock)
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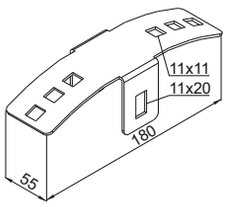
N - New product

Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Upper base east-west
PGWZMC



PGWZMC

≠ 2,0 mm

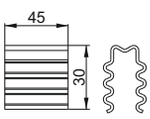
CODE	PV panel inclination angle α	1 pcs [kg]	catalogue no.	MOQ pcs.
PGWZMC	10°;15°;20°	0,17	878000	10 pcs. / 1 pcs.

Advantages:
- universal application for structures with tilt angled panels 10°, 15° or 20°
- quick installation with 3 screws
- high strength parameters
- made of material in Magnelis® coating, MagiZinc®, PosMAC providing high corrosion resistance

APPLICATION
Mounting to the vertical, center profile in an east-west construction, allows screwing the other profiles at the right angle

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Spacer
BR45/1MC



BR45/1MC

≠ 1,0 mm

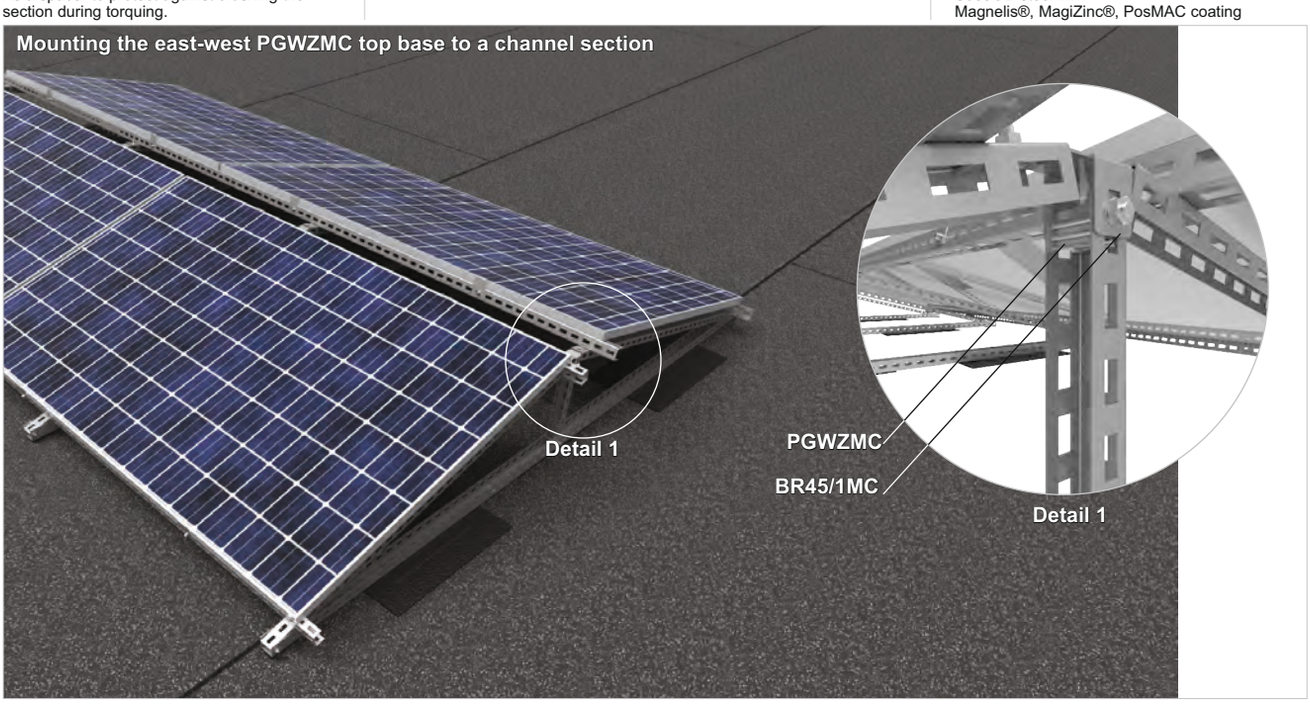
CODE	catalogue no.	MOQ pcs.
BR45/1MC	7041455	50 pcs. / 1 pcs.

Advantages:
- special profiling strengthens the element, prevents entry into the light of the profile perforation when tightening fastening screws and increases the contact surface of the strut plate with the inner surfaces of the profile

APPLICATION
As a spacer to protect against crushing the section during torquing.

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Note: orders for PV farms ≥0.5 MW delivered in collective packages



STM - Standard stock product (available in stock)
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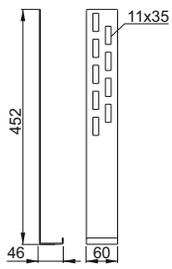
Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Panel adapter

APPMC



APPMC

≠ 2,0 mm

CODE	1 pcs kg	catalogue no.	pcs.	MOQ pcs.	
APPMC	0,41	892525	10	1	STM

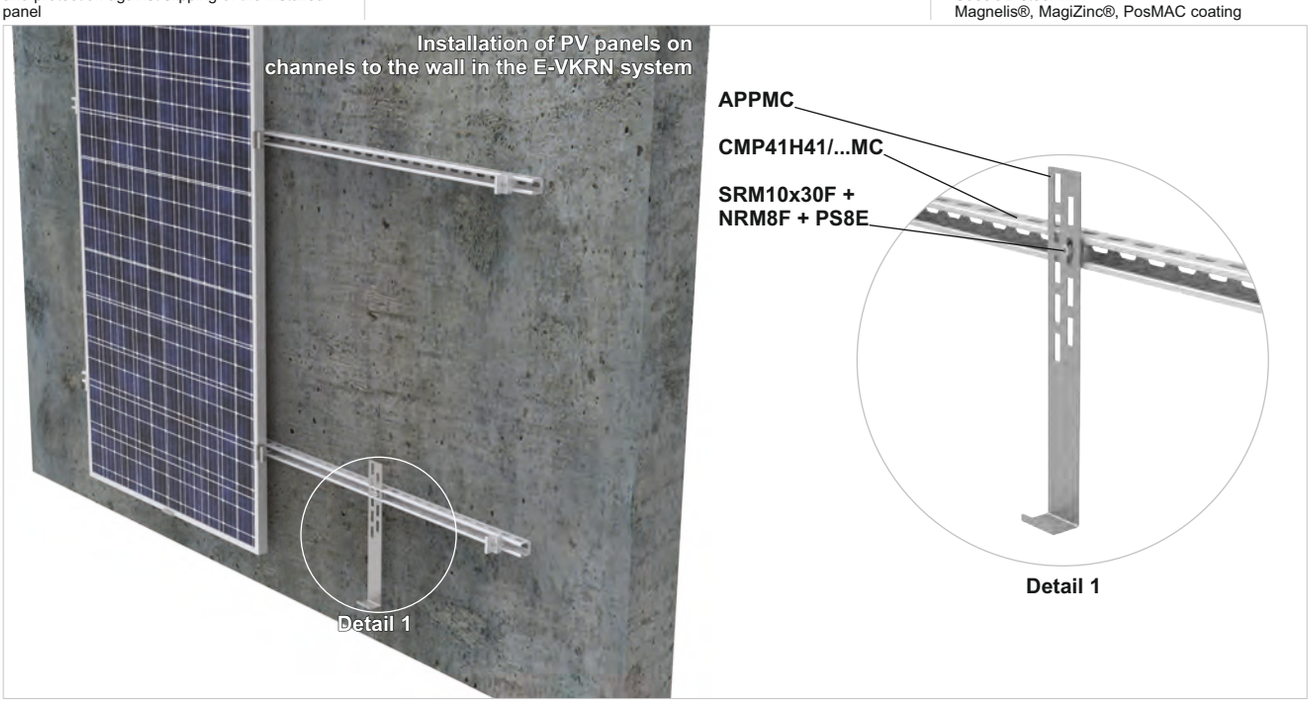
Advantages:
- improving the safety of elevation structures and balustrades
- made of steel in Magnelis®, MagiZinc® coating, PosMAC with very high corrosion resistance
- high strength parameters

Use 1 set of SRM10x30F for installation

Note: orders for PV farms ≥0.5 MW delivered in collective packages

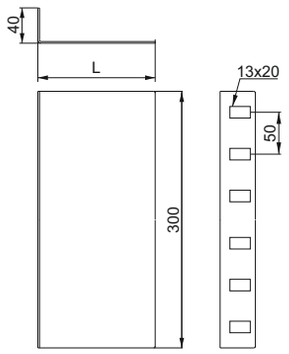
APPLICATION
To support the panel during the installation of construction to the profiles on the elevation and protection against slipping of the installed panel

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating



Base Plate

PDOP...300MC



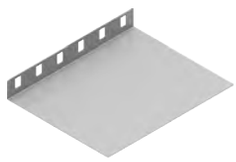
PDOP...300MC

≠ 1,5 mm

CODE	lenght L mm	1 pcs. kg	catalogue no.	pcs.	
PDOP300MC	240	1,12	858430	10	
PDOPD300MC	478,5	2,34	858429	10	

Advantages:
- overall dimensions adjusted to the most popular sizes of concrete blocks
- special perforation allowing the mounting of base plates for different types of structures
- made of Magnelis®-coated material with very high corrosion resistance

For the assembly use 2 x SGKFM10x20PV Screw Sets



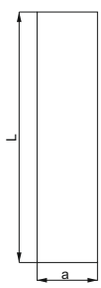
N STM

APPLICATION
Laying the ballast and ballasting the structure

MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Vibration Damping Rubber

SB...



SBV...

≠ 5 mm

CODE	width a mm	lenght L mm	1 pcs. kg	catalogue no.	pcs.	
SBV50x100	50	100	0,18	895500	50	STM
SBV50x500	50	500	0,90	895501	50	STM
SBV250x350	250	350	0,32	895507	30	STM

SBR...

≠ 10 mm

CODE	width a mm	lenght L mm	1 pcs. kg	catalogue no.	pcs.	MOQ pcs.	
SBR50x500	50	500	0,18	890001	50	1	ST
SBR150x500	150	500	0,55	890002	20	1	ST
SBR250x350	250	350	0,64	890007	30	1	ST

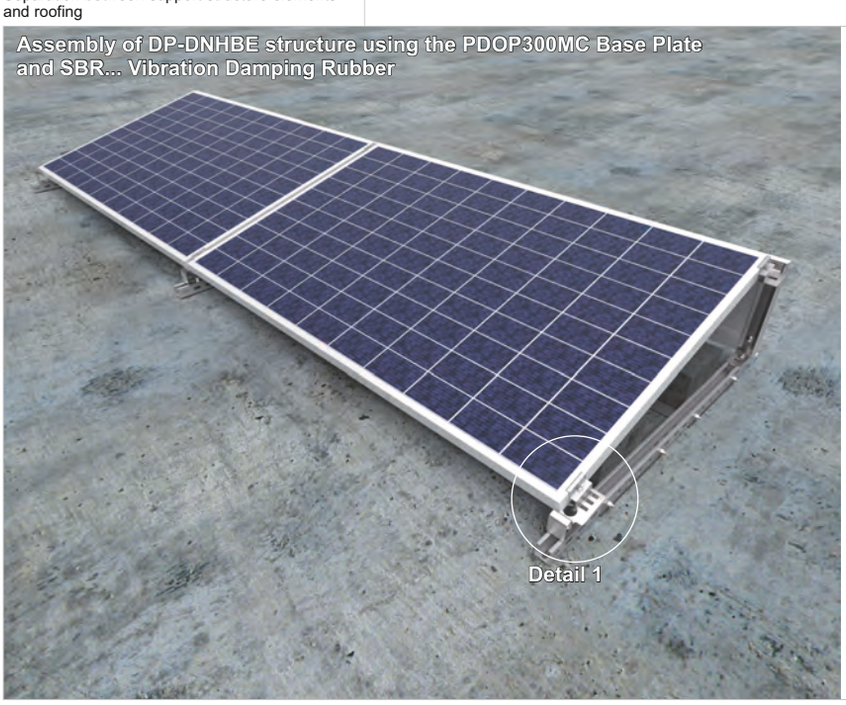
Advantages:
- special rubber that absorbs vibrations and does not absorb water
- dimensions adapted to elements of BAKS structures

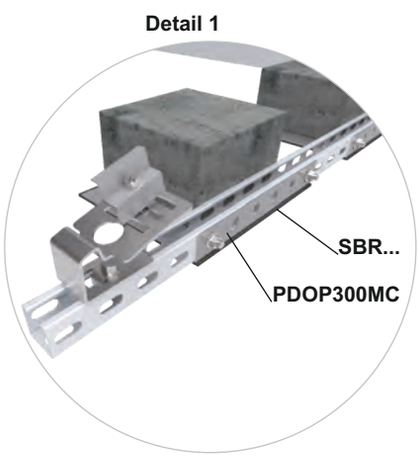
Note: orders for PV farms ≥0.5 MW delivered in collective packages

N STM ST

APPLICATION
Separation between support structure elements and roofing

MATERIAL
Styrene-butadiene rubber



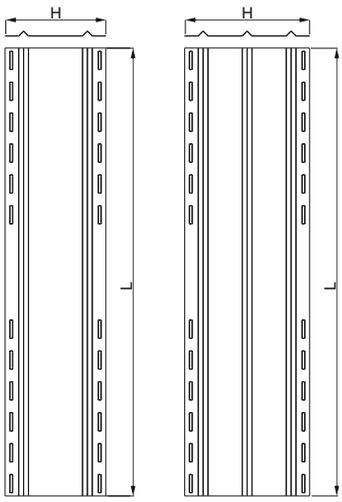


STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Universal wind shield with adjustable length

OWN10-15/...MC **OWN20/...MC**



OWN.../...MC

≠ 0,5 mm

CODE	height H mm	lenght L mm	kg 1 pcs.	catalogue no.	pcs.
OWN10/1,8MC	238	1800	1,90	**851018**	5
OWN15/1,8MC	320	1800	2,40	**851518**	5
OWN20/1,8MC	404	1800	3,00	**852018**	5
OWN10/2,12MC	238	2120	2,20	**851021**	5
OWN15/2,12MC	320	2120	2,90	**852021**	5
OWN20/2,12MC	404	2120	3,60	**859614**	5
OWN10/2,4MC	238	2400	3,30	**851024**	5
OWN15/2,4MC	320	2400	2,50	**851524**	5
OWN20/2,4MC	404	2400	4,10	**852024**	5

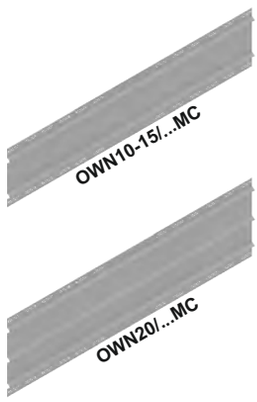
Advantages:
- special embossing to strengthen and stiffen the covers
- specially designed cut-outs allowing to break out hole plugs without leaving sharp edges in the product
- dense perforation allowing to mount the cover to the construction with different panels
- special break-out cut-outs for simple screwing on covers for panel top brackets
- fabrication in Magnelis®, MagiZinc® coated material, PosMAC with very high corrosion resistance
- no need for a clamping PDOW...NMC flat bar
- super price

Attention.
OWN.../...MC covers fit the new type of UPGGC...MC holders with threaded holes M8 (pg. 81) in the DP-DNH...E design and to the DP-DTH...N design

OWN.../...MC shields do not fit the old type of UPGC...MC holders

N

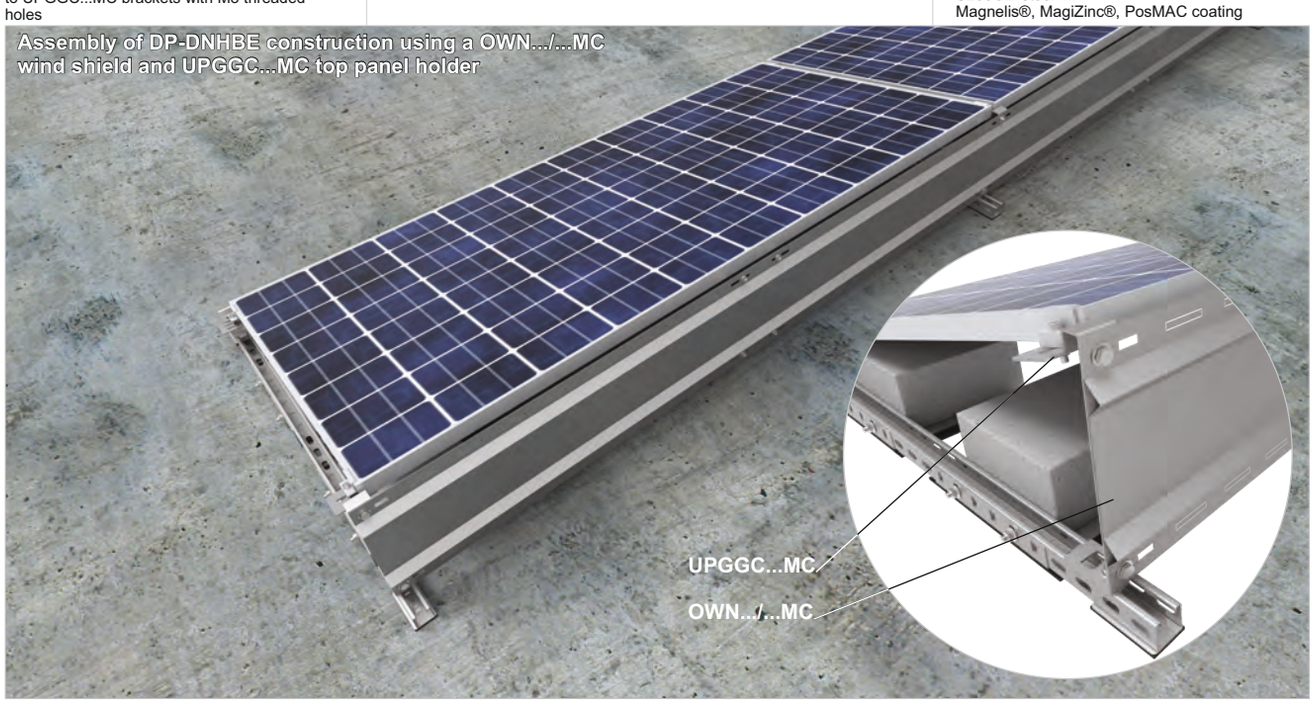
STM



Note: orders for PV farms ≥0.5 MW delivered in collective packages

APPLICATION
Mounting to structures on flat roofs with a panel angle of 10°, 15° or 20° in order to improve the aerodynamic properties of the construction and reduce the weight of the ballast. The covers fit to UPGGC...MC brackets with M8 threaded holes

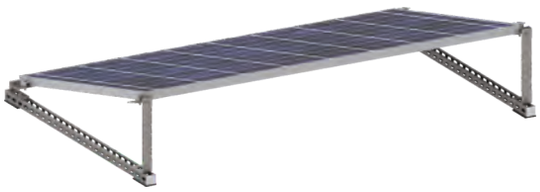
MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

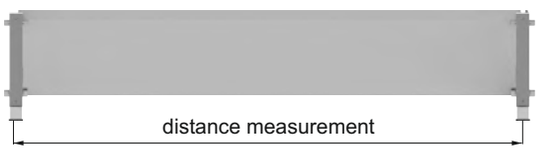


STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

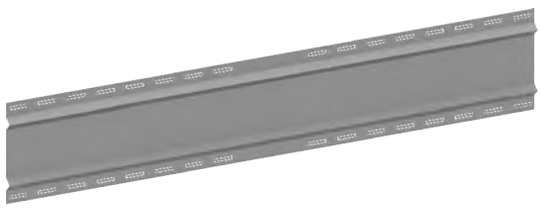
Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

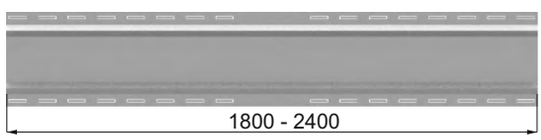
Wind shield installation instructions



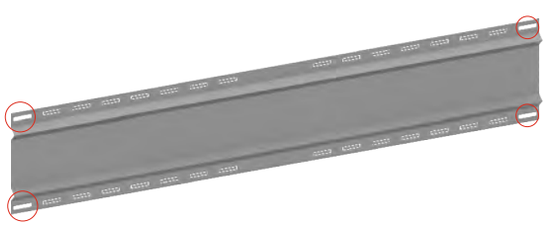


1. Measure the outer distance between UPGGC...MC brackets to which the panel is mounted

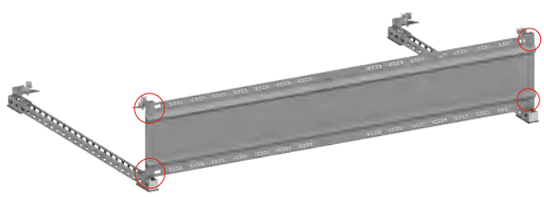




2. Choose the appropriate size of the cover for the the measured distance between the handles



3. Using a flathead screwdriver, break out the holes at the beginning and at the end of the OWN.../...MC covers.

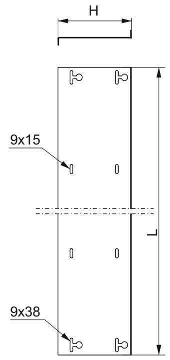


4. The cover is added to the UPGGC...MC brackets and tightened with M8 screws into the threaded holes of the holders

PATTERN COPYRIGHTED

Wind Shield

OWP...NMC



The OWPP... Wind Shield for panels with the length 1626-1663 mm
The OWP1... Wind Shield for panels with the length 1664-1700 mm
The OWP2... Wind Shield for panels with the length 1943-1980 mm
The OWP3... Wind Shield for panels with the length 1981-2018 mm
The OWP4... Wind Shield for panels with the length 1722-1758 mm
The OWP5... Wind Shield for panels with the length 1700-1721 mm
The OWP6... Wind Shield for panels with the length 1759-1796 mm
The OWP7... Wind Shield for panels with the length 1797-1834 mm
The OWP8... Wind Shield for panels with the length 1835-1872 mm
The OWP9... Wind Shield for panels with the length 1873-1910 mm
The OWP10.. Wind Shield for panels with the length 1911-1942 mm
The OWP11.. Wind Shield for panels with the length 2019-2056 mm
The OWP12.. Wind Shield for panels with the length 2057-2094 mm
The OWP13.. Wind Shield for panels with the length 2095-2132 mm
The OWP14.. Wind Shield for panels with the length 2133-2170 mm
The OWP15.. Wind Shield for panels with the length 2171-2208 mm
The OWP16.. Wind Shield for panels with the length 2209-2246 mm
The OWP17.. Wind Shield for panels with the length 2247-2284 mm
The OWP18.. Wind Shield for panels with the length 2285-2322 mm

Advantages:
- Installation to the structure allows for the reduction of the ballast required to ballast the structure
- special cut-outs allow the shield to be put on by one person without having to move and hold the screws from the other side
- universal sizes adapted for different panel lengths

Note:
In case of orders for less than 30 pcs of Wind Shields using OWN...MC Universal Wind Shields is recommended

For the assembly use 4 x SGKFM8x20 Screw Sets

APPLICATION
Mounting to structures for flat roofs with 10°, 15° and 20° inclination angles to improve the aerodynamic strength of the structures

OWPP...NMC

≠ 0,7 mm

CODE	height H mm	lenght L mm	kg 1 pcs.	catalogue no.	pcs.	MOQ pcs.
OWPP10NMC	238	1730	4,01	859711	10	50
OWPP15NMC	320	1730	5,15	859716	10	50
OWPP20NMC	409	1730	6,38	859721	10	50

OWP...NMC

≠ 0,7 mm

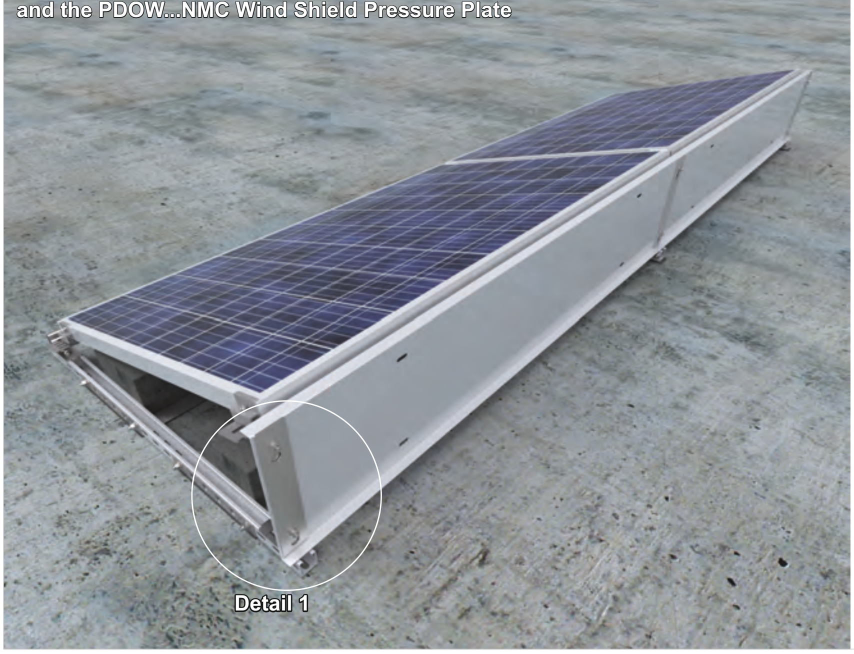
CODE	height H mm	lenght L mm	kg 1 pcs.	catalogue no.	pcs.	MOQ pcs.
OWP1P10NMC	238	1767	4,10	859811	1	50
OWP1P15NMC	320	1767	5,26	859816	1	50
OWP1P20NMC	409	1767	6,52	859821	1	50
OWP2P10NMC	238	2047	4,75	859911	1	50
OWP2P15NMC	320	2047	6,09	859916	1	50
OWP2P20NMC	409	2047	7,55	859921	1	50
OWP3P10NMC	238	2084	4,83	858111	1	50
OWP3P15NMC	320	2084	6,20	858016	1	50
OWP3P20NMC	409	2084	7,69	858021	1	50
OWP4P10NMC	238	1825	4,23	858211	1	50
OWP4P15NMC	320	1825	5,43	858216	1	50
OWP4P20NMC	409	1825	6,73	858321	1	50
OWP5P10NMC	238	1804	2,80	869511	1	50
OWP5P15NMC	320	1804	3,65	869515	1	50
OWP5P20NMC	409	1804	4,50	869520	1	50
OWP6P10NMC	238	1862	2,90	869610	1	50
OWP6P15NMC	320	1862	3,80	869615	1	50
OWP6P20NMC	409	1862	4,65	869620	1	50
OWP7P10NMC	238	1899	2,95	869710	1	50
OWP7P15NMC	320	1899	3,85	869715	1	50
OWP7P20NMC	409	1899	4,75	869720	1	50
OWP8P10NMC	238	1936	3,05	869810	1	50
OWP8P15NMC	320	1936	3,95	869815	1	50
OWP8P20NMC	409	1936	4,85	869820	1	50
OWP9P10NMC	238	1973	3,10	869910	1	50
OWP9P15NMC	320	1973	4,05	869915	1	50
OWP9P20NMC	409	1973	4,95	869920	1	50
OWP10P10NMC	238	2010	3,15	871010	1	50
OWP10P15NMC	320	2010	4,10	871015	1	50
OWP10P20NMC	409	2010	5,05	871020	1	50
OWP11P10NMC	238	2121	3,30	871110	1	50
OWP11P15NMC	320	2121	4,33	871115	1	50
OWP11P20NMC	409	2121	5,35	871120	1	50
OWP12P10NMC	238	2158	3,35	871210	1	50
OWP12P15NMC	320	2158	4,40	871215	1	50
OWP12P20NMC	409	2158	5,45	871220	1	50
OWP13P10NMC	238	2195	3,40	871310	1	50
OWP13P15NMC	320	2195	4,48	871315	1	50
OWP13P20NMC	409	2195	5,55	871320	1	50
OWP14P10NMC	238	2232	3,45	181410	1	50
OWP14P15NMC	320	2232	4,55	871415	1	50
OWP14P20NMC	409	2232	5,65	871420	1	50
OWP15P10NMC	238	2269	3,50	871510	1	50
OWP15P15NMC	320	2269	4,63	871515	1	50
OWP15P20NMC	409	2269	5,75	871520	1	50
OWP16P10NMC	238	2306	3,55	871610	1	50
OWP16P15NMC	320	2306	4,70	871615	1	50
OWP16P20NMC	409	2306	5,85	871620	1	50
OWP17P10NMC	238	2343	3,60	871710	1	50
OWP17P15NMC	320	2343	4,78	871715	1	50
OWP17P20NMC	409	2343	5,95	871720	1	50
OWP18P10NMC	238	2380	3,65	871810	1	50
OWP18P15NMC	320	2380	4,85	871815	1	50
OWP18P20NMC	409	2380	6,05	871820	1	50

Note: orders for PV farms ≥0.5 MW delivered in collective packages

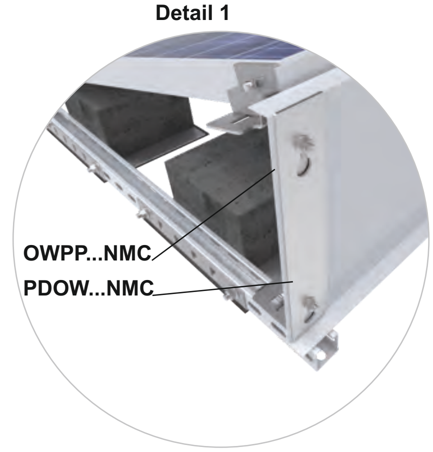
N
ST

MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Assembly of the DP-DNHBE structure with the OWP...NMC Wind Shield and the PDOW...NMC Wind Shield Pressure Plate



Detail 1



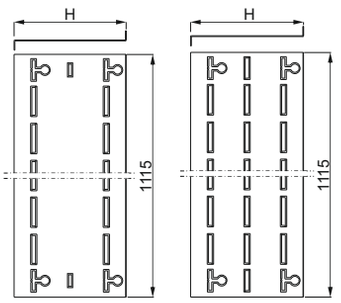
STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 1,2 1,5 2,0 3,0 4,0

Universal Wind Shield – Adjustable

(one set includes 2 pcs with a length of 1115 mm each)

OWN10-15MC **OWN20MC**



APPLICATION
Mounting to structures for flat roofs with 10°, 15° and 20° inclination angles to improve the aerodynamic strength of the structures and reduction of the required ballast

OWN...MC

CODE	height H mm	kg 1 set	≠ 1,0 mm catalogue no.	set
OWN10MC	238	4,96	859712	5
OWN15MC	320	6,40	859713	5
OWN20MC	409	7,96	859714	5

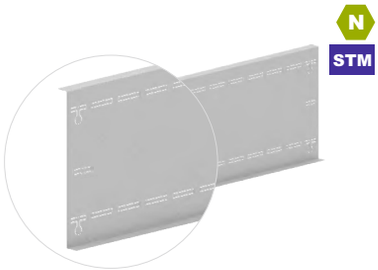
Advantages:
- large length adjustment range: 1200-2165 mm
- dense perforation allowing the wind shield to be adjusted for different panels
- specially designed cut-outs to allow the hole plug to be broken off without leaving sharp edges in the product
- made of Magnelis®-coated material with very high corrosion resistance
- Installation to the structure allows for the reduction of the ballast required to ballast the structure
- special cut-outs allow the shield to be put on by one person without having to move and hold the screws from the other side

For the assembly use 6 - 8 x SGKFM8x14 Screw Sets
One set includes 2 pcs with a length of 1115 mm each

Note:
When using one set of OWN...MC wind shields, they can be adjusted to any structure width within the range of 1200-2165 mm

Production of wind shields with a wider range of length adjustment possible on request

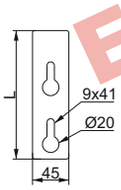
Attention.
OWN...MC covers are replaced by OWN...NMC covers



MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Wind Shield Pressure Plate

PDOW...NMC



APPLICATION
Pressing the wind shield

PDOW...NMC

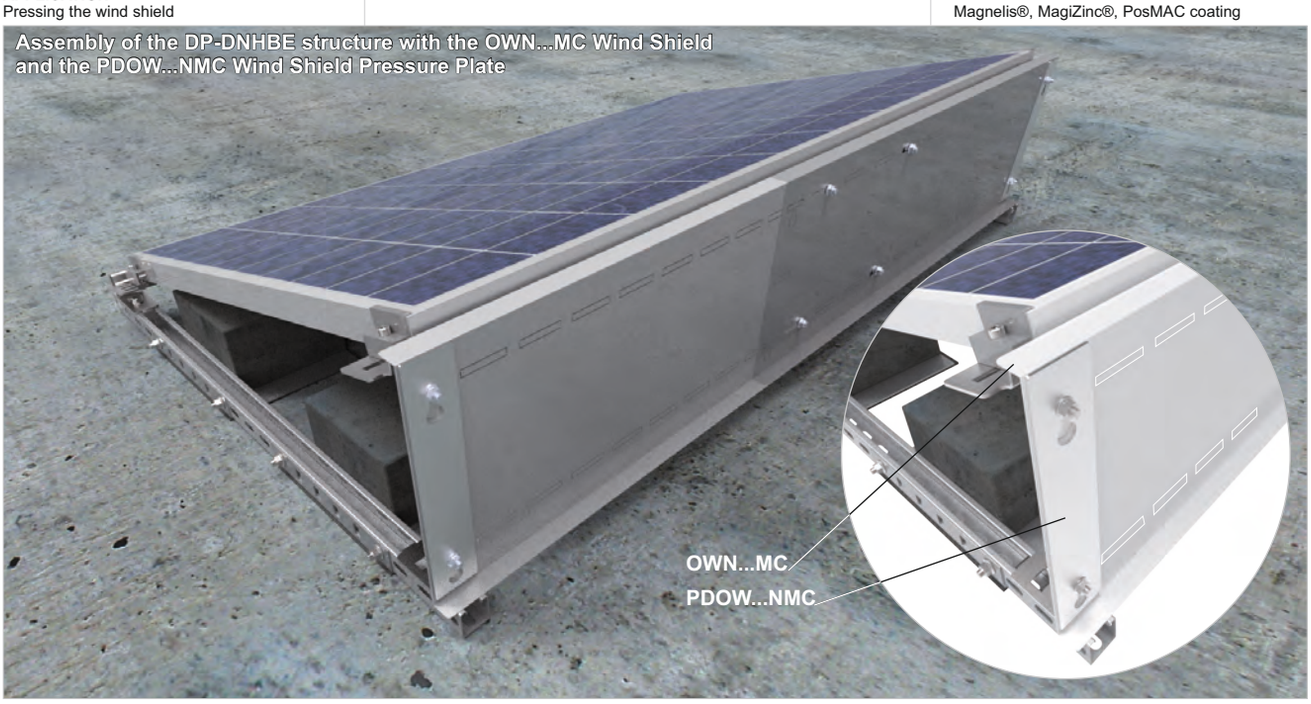
CODE	lenght L mm	kg 1 pcs.	≠ 3,0 mm catalogue no.	pcs.
PDOW10NMC	234	0,30	858811	10
PDOW15NMC	316	0,42	858816	10
PDOW20NMC	405	0,55	858821	10

Advantages:
- stabilisation of the wind shields, prevention of shield vibrations in high winds
- made of Magnelis®-coated material with very high corrosion resistance

For the assembly use 2 x SGKFM8x20 Screw Sets

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

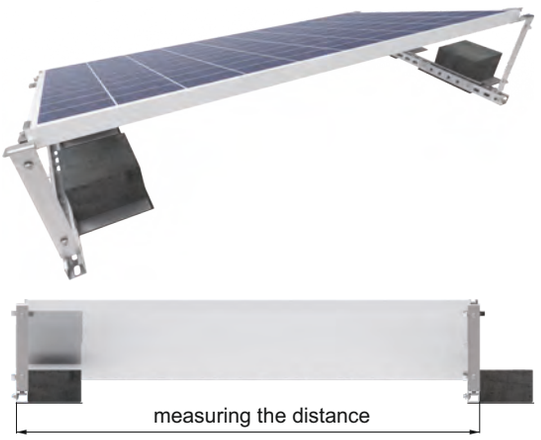
Note: orders for PV farms ≥0.5 MW delivered in collective packages



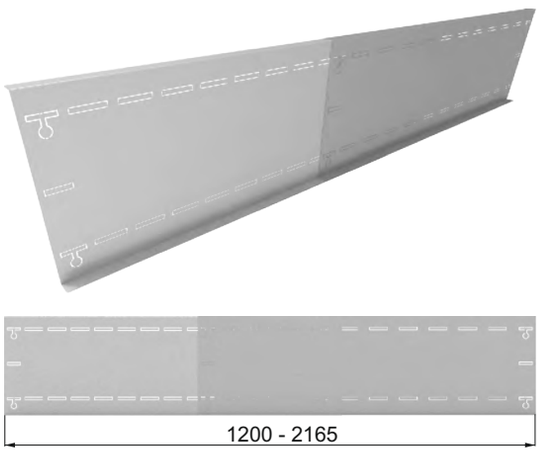
STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

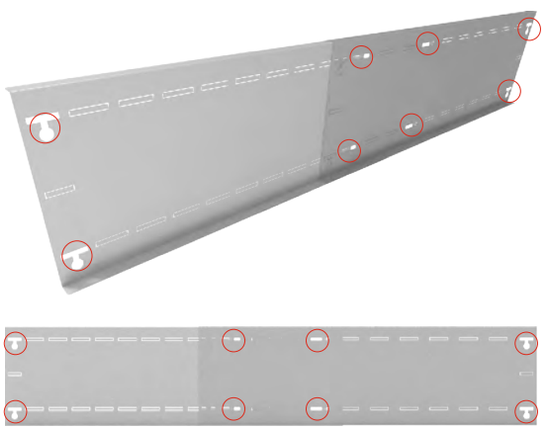
Assembly instructions for wind shields



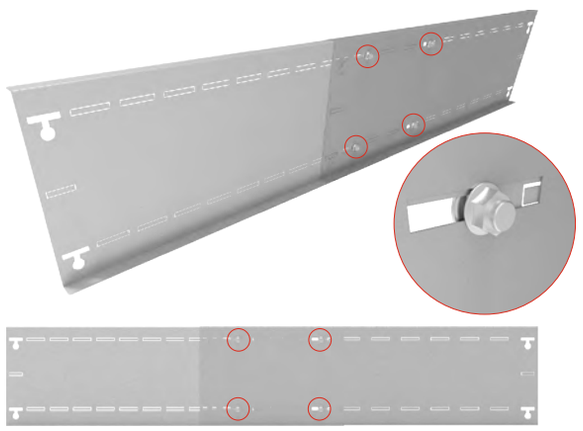
1. Measure the outer distance between the UPGC...NMC holders to which the panel is mounted.



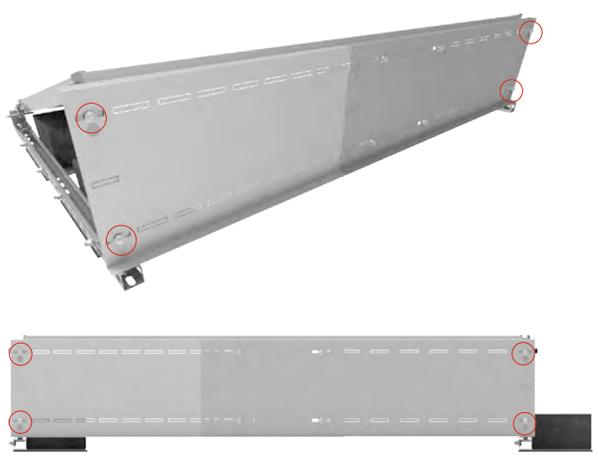
2. Before fitting and tightening the shields to the holders, they should be extended to the length measured previously in the point 1. The length adjustment range of the shields is 1200 - 2165 mm



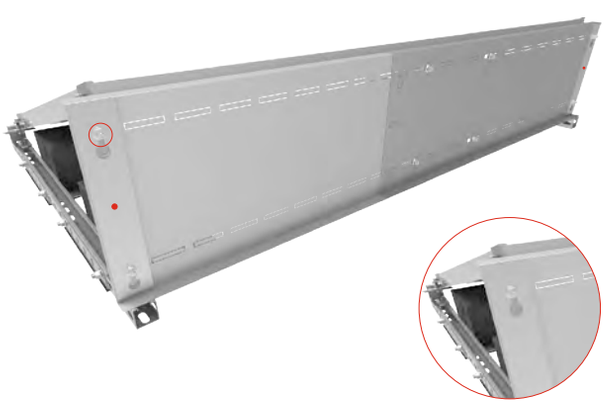
3. Using a flathead screwdriver, break out the holes at the beginning and end of the OWN...MC shields and the two holes overlapping in the shields



4. In the overlapping holes screw the shields together using 4 x SGKFM8x14 Screw Sets



5. Put the screwed shields on the four loose screws previously mounted on the UPGC...NMC holders

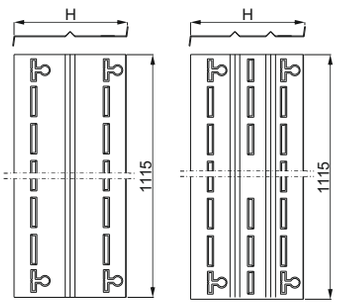


6. Add the PDOW...NMC pressure plates to the already in Steelled wind shields and tighten them with nuts

Universal wind shield with adjustable length

(set includes 2 pieces with a length of 1115 mm each)

OWN10MC **OWN15-20MC**



OWN...NMC

± 0,5 mm

CODE	height H mm	kg 1 set	catalogue no.	set
OWN10NMC	245	1,33	859722	5
OWN15NMC	325	1,76	859723	5
OWN20NMC	415	2,15	859724	5

Advantages:
- large length adjustment range 1200-2165 mm
- dense perforation for adjusting the length of the cover to fit different panels
- specially designed cut-outs allowing to break hole plugs without leaving sharp edges in the product
- made of material in Magnelis® coating, MagiZinc®, PosMAC with very high corrosion resistance
- mounting to the structure allows to reduce the required loading of the structure with ballast
- special cut-outs allow the cover to be fitted by 1 person without the need to refit and hold the bolts from the other side

For mounting with UPGC...NMC brackets, use SGKFM8x20 + PW8F

To screw two covers together, it is necessary to use 4-6 sets of SMM8x16F + 2xPW8F

Attention!
When using one set of OWN...NMC covers, we can make them adapt to any width of the structure in the range of 1200-2100 mm

On request, it is possible to produce covers with a larger range of length adjustment

Attention.
OWN...NMC covers replace OWN...MC covers.

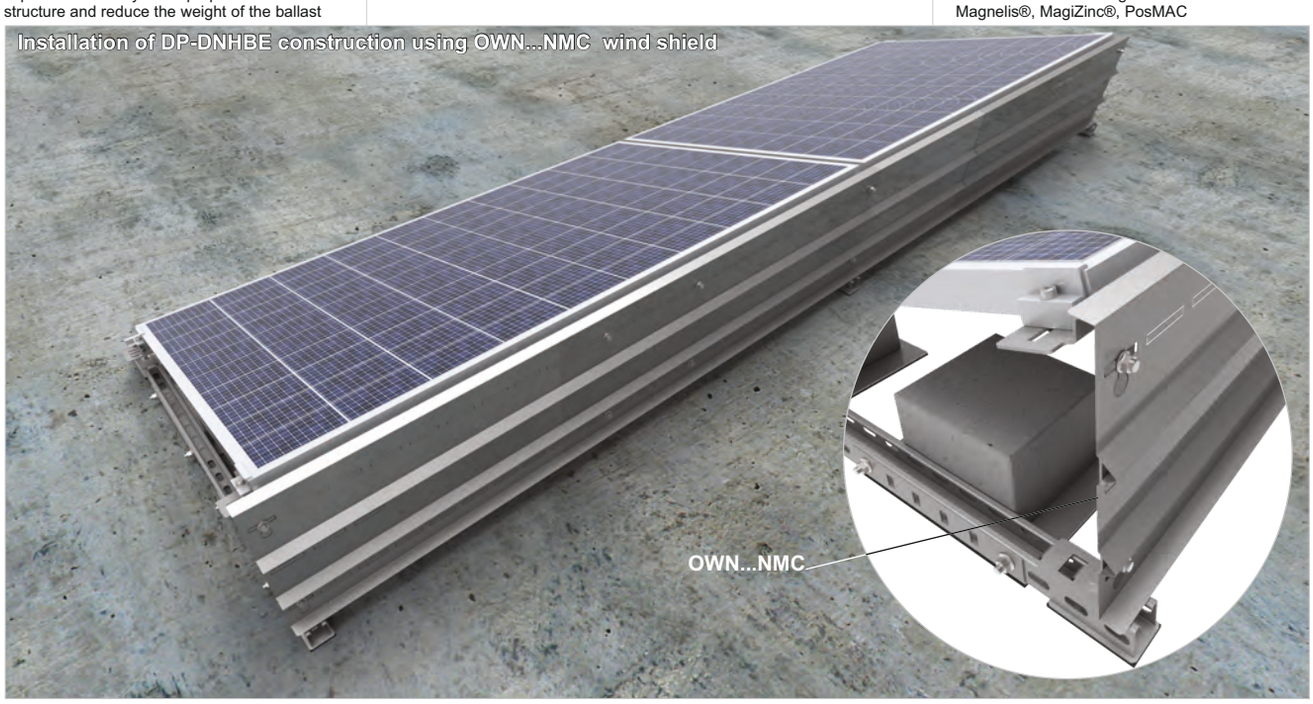
OWN...NMC covers only fit the old UPGC...MC brackets (page 80)

Along with the withdrawal of UPGC...MC brackets from the offer, OWN...MC and OWN...NMC shields are also withdrawn

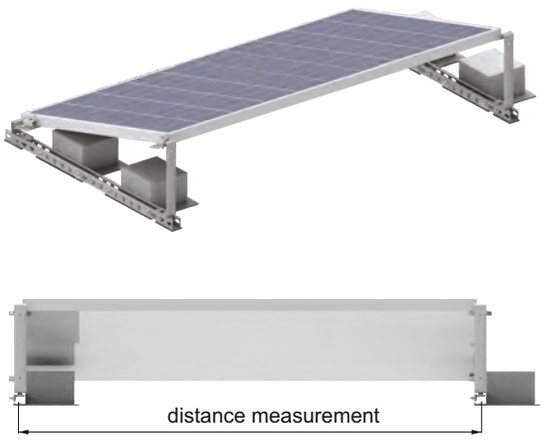
Note: orders for PV farms ≥0.5 MW delivered in collective packages

APPLICATION
Mounting to construction on flat roofs with a panel angle of 10°, 15° or 20° in order to improve the aerodynamic properties of the structure and reduce the weight of the ballast

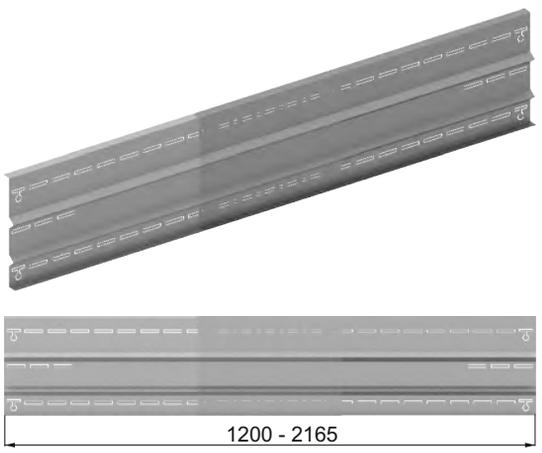
MATERIAL
S350GD steel in coating:
Magnelis®, MagiZinc®, PosMAC



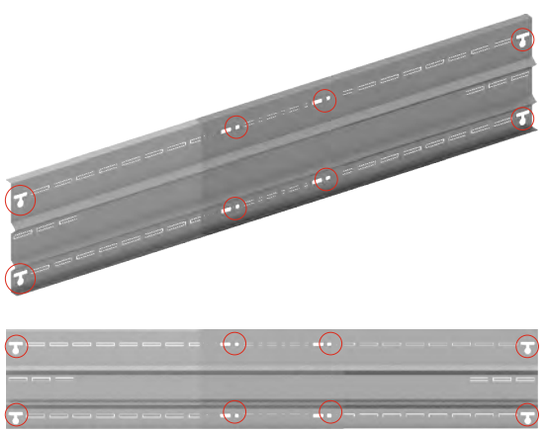
Wind shield installation instructions



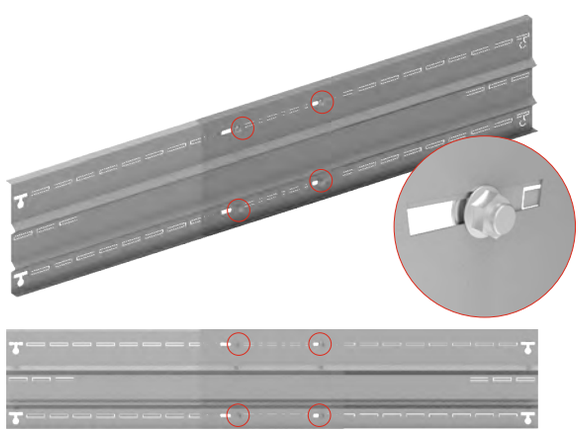
1. Measure the outer distance between UPGC...MC brackets to which the panel is mounted



2. Before attaching and tightening the covers to the handles, extend them to the previously measured length in point 1. The range of adjustment of the length of the shields is 1200 - 2165 mm



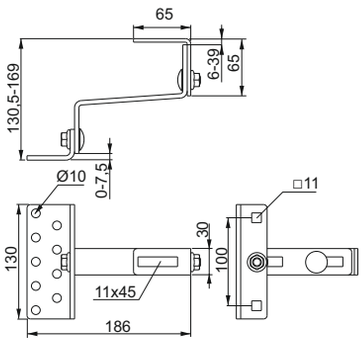
3. Using a flathead screwdriver, break out the holes at the beginning and at the end of the OWN...MC covers, as well as the two holes at the points of overlapping in the covers



4. In the holes that overlap, screw the covers with 4 or 6 sets of SGKFM8x14 screws

5. The bolted covers are placed on the four loosened SGKFM8x20 screws previously mounted to the UPGC...NMC brackets

Adjustable Roof Fixing
DUR40E



APPLICATION
Mounting PV structure elements to a roof covered with ceramic tiles

DUR40E

CODE	1 pcs	catalogue no.	pcs.
DUR40E	1,05	898140	20

Adjustable Roof Fixing for roofs covered with ceramic tiles

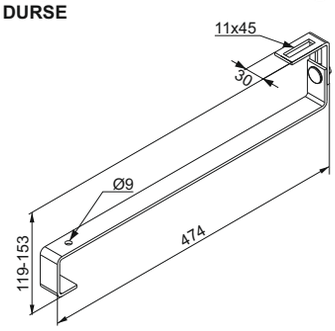
Advantages:
- wide adjustment range in two planes
- possibility of using with any ceramic tile
- possibility of using for various rafter sizes
- 9 holes in the base allow trouble-free mounting to the rafters

For the assembly use: min. 2 x DDW8x100 Wood Screws

STM

MATERIAL
Stainless steel

Adjustable Roof Fixing
DURSE



APPLICATION
Mounting PV structure elements to a roof covered with ceramic tiles

DURSE

CODE	1 pcs	catalogue no.	pcs.
DURSE	0,84	898141	20

Note:
It is recommended to use the fixing as an occasional solution only in places where the rafter cannot be located.

Advantages:
- Installation to roof truss battens
- wide adjustment range

For the assembly use 1 x DDW6x60E Wood Screw

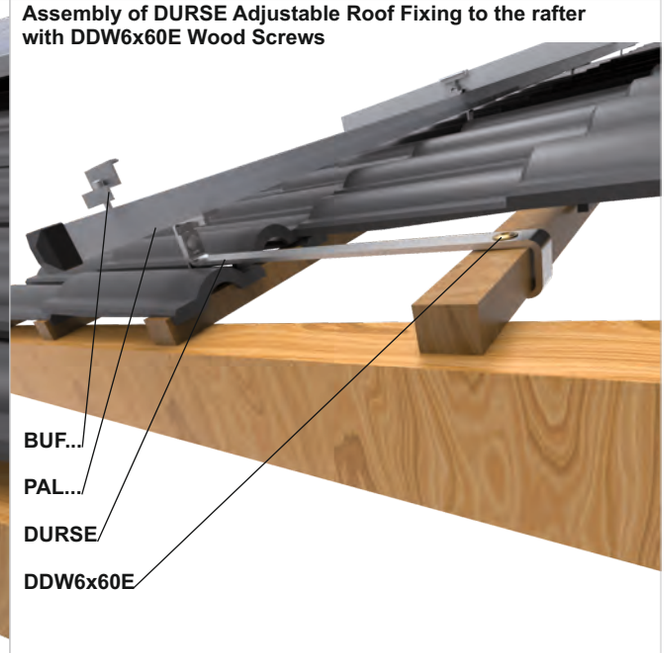
STM

MATERIAL
Stainless steel

Note: orders for PV farms ≥0.5 MW delivered in collective packages

Assembly of DUR40E Adjustable Roof Fixing to the rafter with DDW8x100 Wood Screws

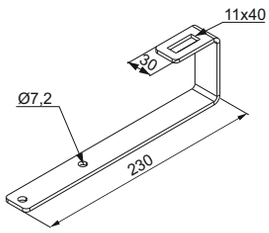
Assembly of DURSE Adjustable Roof Fixing to the rafter with DDW6x60E Wood Screws



STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Roof Fixing

DUF60E



APPLICATION
Mounting PV structure elements to a roof covered with bituminous tiles

DUF60E

CODE	1 pcs	catalogue no.	pcs.
DUF60E	0,25	897960	20

Advantages:
- **longitudinal hole for adjusting the position of the aluminium profile**
- **extended longer arm to make screwing easier**
- **product made of stainless steel with high corrosion resistance**

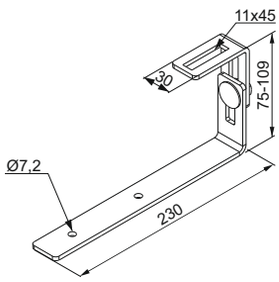
For the assembly use 2 x DDW6x60E Wood Screws

STM

MATERIAL
Stainless steel

Adjustable Roof Fixing

DUFR60E



APPLICATION
Mounting PV structure elements to a roof covered with bituminous tiles

DUFR60E

CODE	1 pcs	catalogue no.	pcs.
DUFR60E	0,39	897860	20

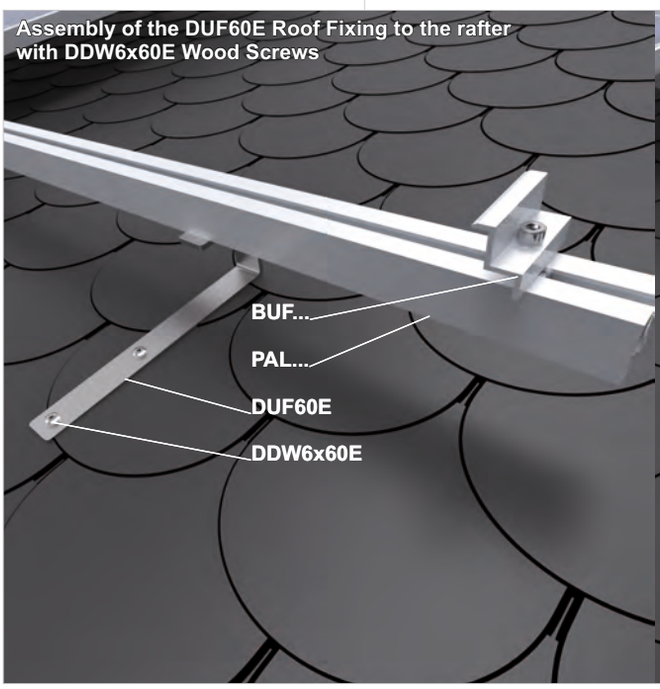
Advantages:
- **height adjustment of the upper element allows to level the holders and compensate for unevenness on the roof**
- **longitudinal hole for adjusting the position of the aluminium profile**
- **extended longer arm to make screwing easier**
- **product made of stainless steel with high corrosion resistance**

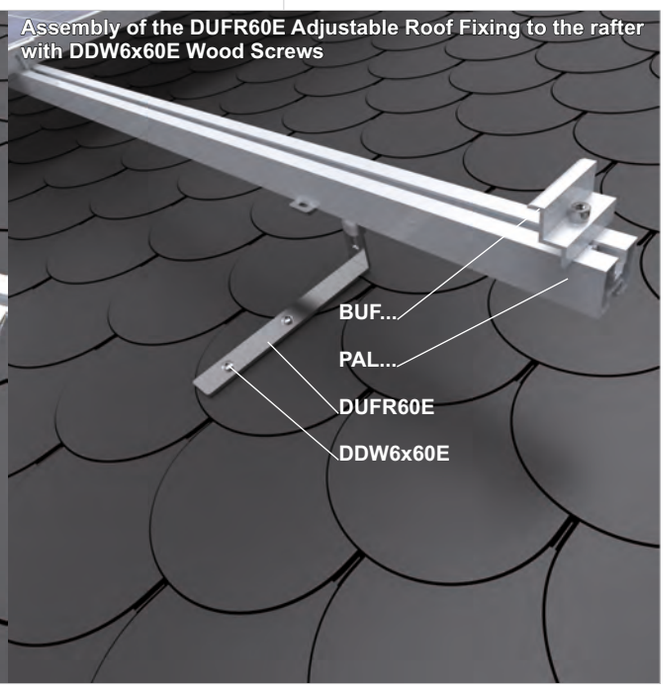
For the assembly use 2 x DDW6x60E Wood Screws

STM

MATERIAL
Stainless steel

Note: orders for PV farms ≥0.5 MW delivered in collective packages

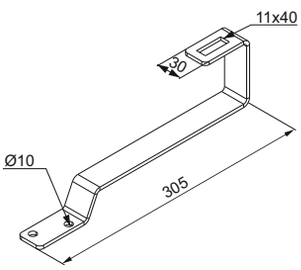




STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Roof Fixing

DUF75E



APPLICATION
Mounting PV structure elements to a roof covered with scale-shaped tiles

DUF75E

CODE	1 pcs	catalogue no.	pcs.
DUF75E	0,30 kg	897975	20

Advantages:
- length suitable for most types of tiles
- longitudinal hole for adjusting the position of the aluminium profile
- product made of stainless steel with high corrosion resistance

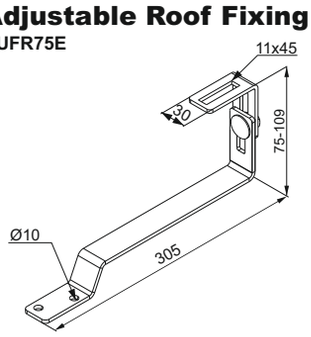
For the assembly use 2 x DDW8x100 Wood Screws

STM

MATERIAL
Stainless steel

Adjustable Roof Fixing

DUFR75E



APPLICATION
Mounting PV structure elements to a roof covered with scale-shaped tiles

DUFR75E

CODE	1 pcs	catalogue no.	pcs.
DUFR75E	0,45 kg	897965	20

Advantages:
- height adjustment of the upper element allows to level the holders and compensate for unevenness on the roof
- length suitable for most types of tiles
- longitudinal hole for adjusting the position of the aluminium profile
- product made of stainless steel with high corrosion resistance

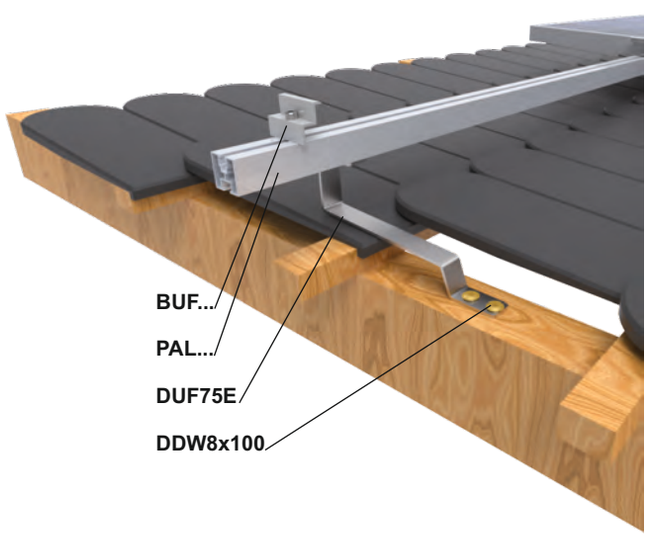
For the assembly use 2 x DDW8x100 Wood Screws

STM

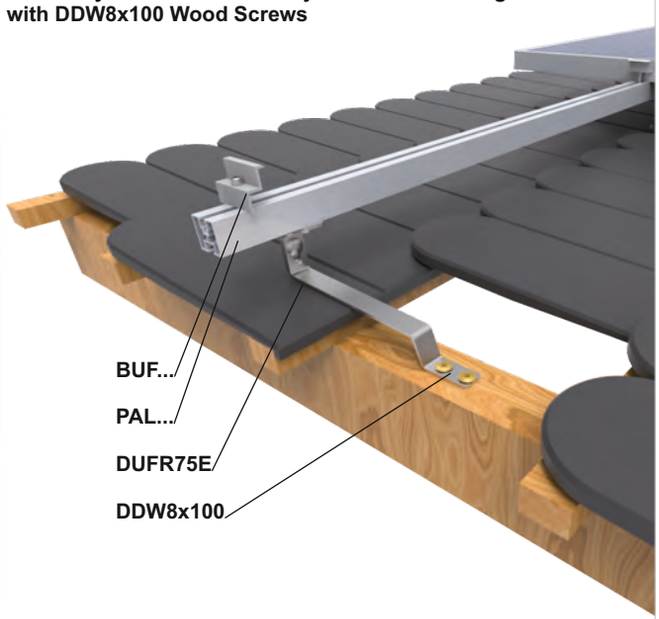
MATERIAL
Stainless steel

Note: orders for PV farms ≥0.5 MW delivered in collective packages

Assembly of the DUF75E Roof Fixing to the rafter with DDW8x100 Wood Screws

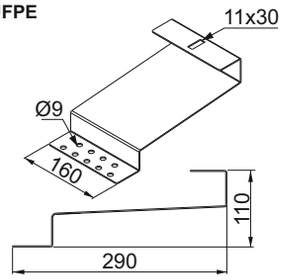


Assembly of the DUFR75E Adjustable Roof Fixing to the rafter with DDW8x100 Wood Screws



STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Roof Fixing
DUFPE

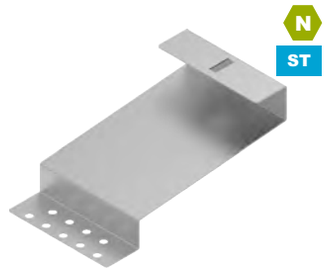


DUFPE

CODE	1 pcs kg	catalogue no.	pcs.	MOQ pcs.
DUFPE	0,30	897976	10	40

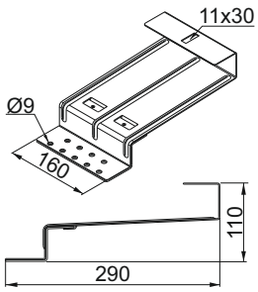
Advantages:
- length suitable for most types of tiles
- longitudinal hole for adjusting the position of the aluminium profile
- made of Magnelis®-coated material with very high corrosion resistance
- Installation of fixings without the need to saw the tiles

For the assembly use 2 x DDW8x100 Wood Screws



N ST

Roof Fixing
DUFWE



APPLICATION
Mounting PV structure elements to a roof covered with scale-shaped tiles

DUFWE

CODE	1 pcs kg	catalogue no.	pcs.	MOQ pcs.
DUFWE	0,30	898076	10	1

Advantages:
- increased strength due to the embossing in the section and the use of an additional Z-profile
- length suited to most types of roof tiles
- longitudinal opening to adjust the position of the aluminium profile
- Magnelis®-coated material with very high corrosion resistance
- installation of brackets without cutting the tiles
- brackets dedicated for installations exposed to greater loads - details on technical department (contact on inner front cover)

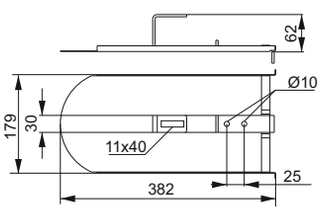
For the assembly use 2 x DDW8x100 Wood Screws

N ST

MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Note: orders for PV farms ≥0.5 MW delivered in collective packages

Roof Fixing with Scale-Shaped Tile
DUF75K...



APPLICATION
Mounting PV structure elements to a roof covered with scale-shaped tiles

DUF75KE

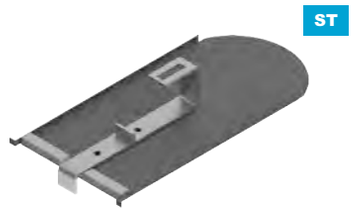
CODE	1 pcs. kg	catalogue no.	pcs.	MOQ pcs.
DUF75KE	0,85	897875	10	40

DUF75KMC

CODE	1 pcs. kg	catalogue no.	pcs.	MOQ pcs.
DUF75KMC	0,85	897855	10	40

Advantages:
- no need to mill or cut classic roof tiles

For the assembly use 2 x DDW8x100E Wood Screws

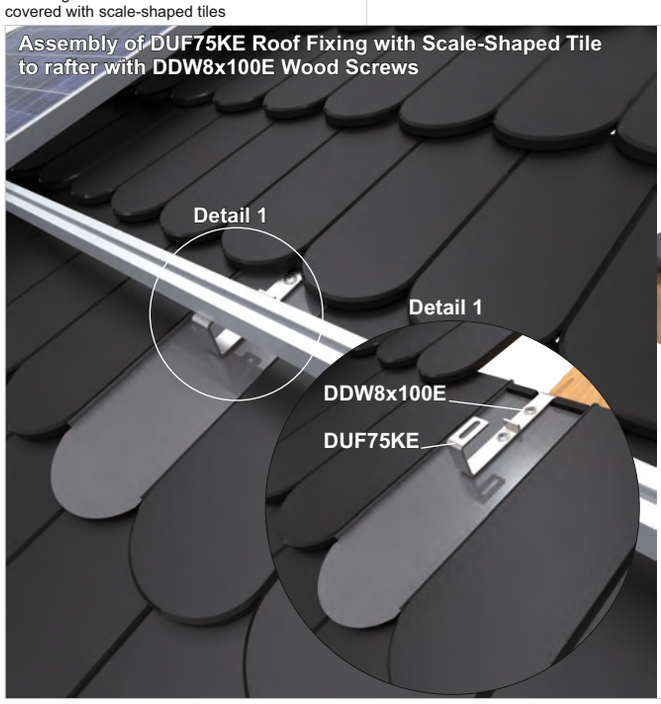


ST

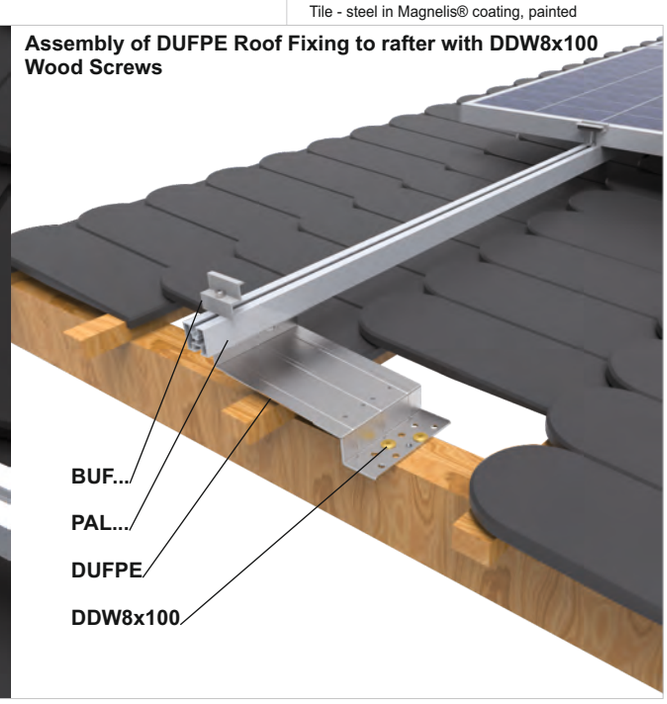
MATERIAL for DUF75KE
Hook - stainless steel
Tile - stainless steel, painted

MATERIAL for DUF75KMC
Hook - stainless steel
Tile - steel in Magnelis® coating, painted

Assembly of DUF75KE Roof Fixing with Scale-Shaped Tile to rafter with DDW8x100E Wood Screws



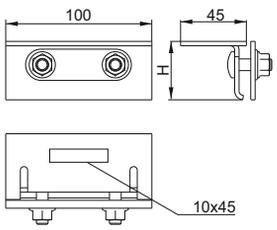
Assembly of DUFPE Roof Fixing to rafter with DDW8x100 Wood Screws



STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Seam Roof Clamp

UBZRPE...



UBZRPE...

CODE	height H mm	kg 1 pcs	≠ 3,0 mm catalogue no.	pcs.
UBZRPE25	50	0,43	**890125**	100
UBZRPE32	55	0,46	**890132**	100

Advantages:
- **non-invasive mounting to the roof (mounting to the standing seams)**
- **quick Installation without the need to locate roof truss elements**
- **high strength parameters**
- **high quality and aesthetic design**
- **the clamping element of the fixing has a strengthening overpress**

Note:
A version of UBZRPE65 and UZBRE65 clamps with height H=65mm available on request

Note:
Table with the manufacturers of standing seam metal sheets to which UBZRPE25 and UBZRPE32 clamps fit

CODE	Metal Sheet Manufacturer	Seam height [mm]
UBZRPE25	Balex	25,1
	Budmat	25/27
	Metzink	25 (before folding) 28 (after folding)
	Pruszyński	25
	WlaSteel	25
UBZRPE32	BlachDom	32
	Blachotrapez	32
	RUUKKI	32

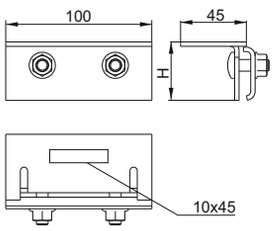
STM

APPLICATION
Mounting PV structure elements to a roof covered with sheet metal seam plates

MATERIAL
Stainless steel

Seam Roof Clamp

UBZRE...



UBZRE...

CODE	height H mm	kg 1 pcs	≠ 3,0 mm catalogue no.	pcs.
UBZRE25	52	0,50	**890225**	100
UBZRE32	57	0,53	**890232**	100

Advantages:
- **non-invasive mounting to the roof (mounting to the standing seams)**
- **quick Installation without the need to locate roof truss elements**
- **high strength parameters**
- **high quality and aesthetic design**

Note:
Table with the manufacturers of standing seam metal sheets to which UBZRE25 and UBZRE32 clamps fit

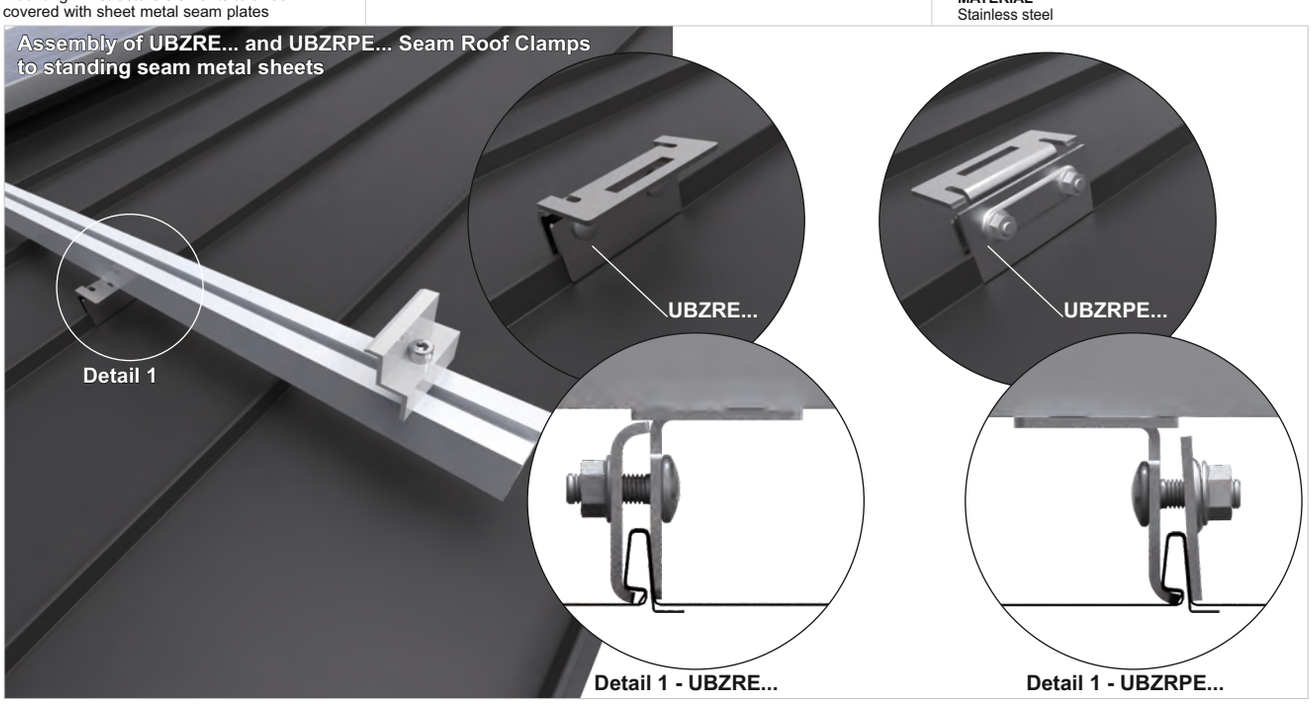
CODE	Metal Sheet Manufacturer	Seam height [mm]
UBZRE25	Balex	25,1
	Budmat	25/27
	Metzink	25 (before folding) 28 (after folding)
	Pruszyński	25
	WlaSteel	25
UBZRE32	BlachDom	32
	Blachotrapez	32
	RUUKKI	32

STM

Note: orders for PV farms ≥0.5 MW delivered in collective packages

APPLICATION
Mounting PV structure elements to a roof covered with sheet metal seam plates

MATERIAL
Stainless steel

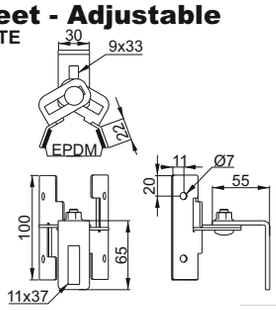


STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Roof Fixing for Trapezoidal Sheet - Adjustable

RUBTE



RUBTE

CODE	1 pcs	catalogue no.	pcs.
RUBTE	0,50	899501	10

Thanks to the adjustable angle the fixing fits all types of trapezoidal metal sheets.

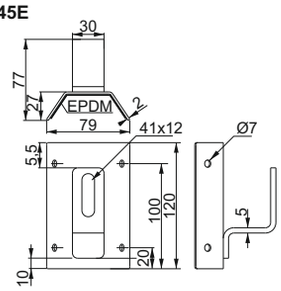
Advantages:
- **wide adjustment range for use with different trapezoidal metal sheets (width from 20 - 85 mm)**
- **fixing equipped with a EPDM sealing rubber on the underside**
- **product made of stainless steel with high corrosion resistance**

For the assembly use 4 x SMDP6x25E Self-drilling Screws

MATERIAL
Stainless steel

Roof Fixing for Trapezoidal Sheet

UBT45E



UBT45E

CODE	1 pcs	catalogue no.	pcs.
UBT45E	0,40	890110	100

Fixing adapted to T45 type sheet metal

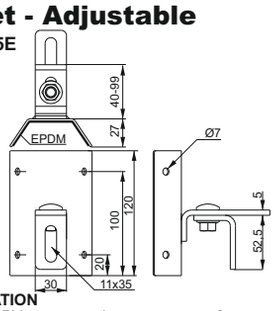
Advantages:
- **high strength of the fixing**
- **fixing equipped with a EPDM sealing rubber on the underside**
- **product made of stainless steel with high corrosion resistance**

For the assembly use 4 x SMDP6x25E Self-drilling Screws

MATERIAL
Stainless steel

Roof Fixing for Trapezoidal Sheet - Adjustable

UBTR45E



APPLICATION
Mounting PV structure elements to a roof covered with trapezoidal metal sheet

UBTR45E

CODE	1 pcs	catalogue no.	pcs.
UBTR45E	0,50	890120	100

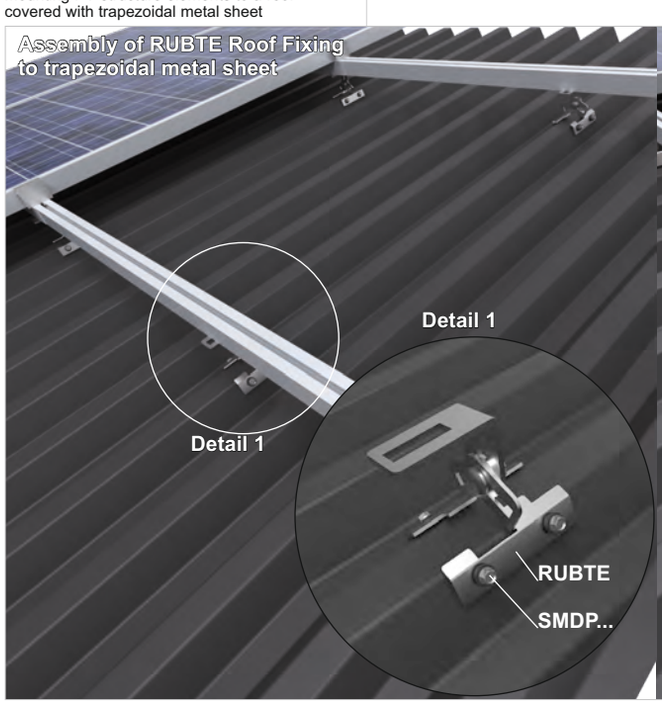
Fixing adapted to T45 type sheet metal

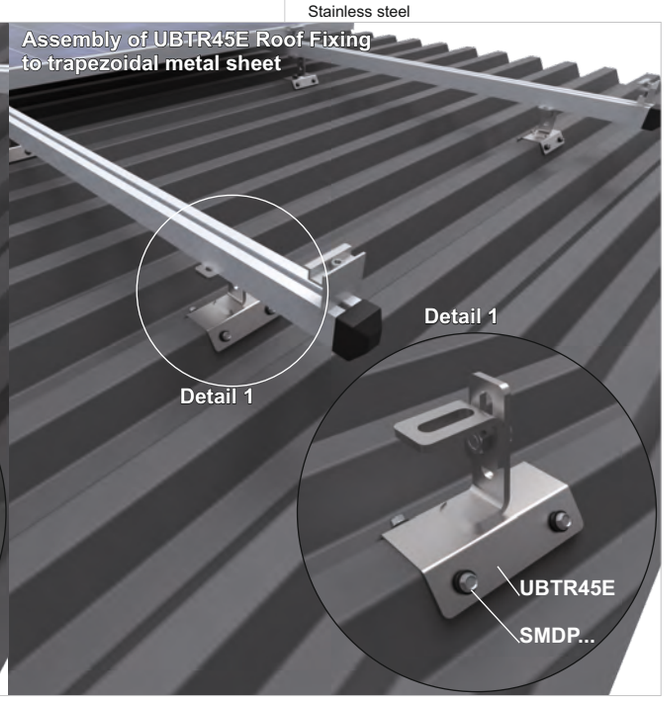
Advantages:
- **wide adjustment range for levelling the structure**
- **fixing equipped with a EPDM sealing rubber on the underside**
- **product made of stainless steel with high corrosion resistance**

For the assembly use 4 x SMDP6x25E Self-drilling Screws

MATERIAL
Stainless steel

Note: orders for PV farms ≥0.5 MW delivered in collective packages

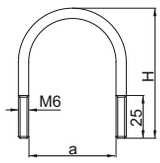




STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Round U-bolt

CYB...E



APPLICATION
Fixing the structure to balcony railings with round section

CYB...E

CODE	dimension a mm	dimension H mm	kg 1 pcs.	catalogue no.	pcs.
CYB16E	18	35	0,02	**899916**	1
CYB20E	22	39	0,02	**899920**	1
CYB25E	27	44	0,02	**899925**	1
CYB32E	34	51	0,02	**899932**	1
CYB40E	42	59	0,03	**899940**	1
CYB50E	52	69	0,03	**899950**	1
CYB60E	62	79	0,03	**899960**	1
CYB63,5E	65	90	0,04	**899963**	1

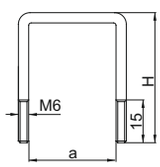
Advantages:
- **products made of stainless steel with very high corrosion resistance**
- **the sizes of U-bolts fit most of the profiles of which the balcony railings are made**
- **quick assembly of the structures to balcony railings**

ST

MATERIAL
Stainless steel

Square U-bolt

CYK...E



APPLICATION
Fixing the structure to balcony railings with square section

CYK...E

CODE	dimension a mm	dimension H mm	kg 1 pcs.	catalogue no.	pcs.
CYK20E	22	41	0,02	**899820**	1
CYK25E	27	46	0,02	**899825**	1
CYK30E	32	51	0,02	**899832**	1
CYK40E	42	61	0,03	**899840**	1
CYK50E	52	71	0,03	**899850**	1
CYK60E	62	81	0,03	**899860**	1

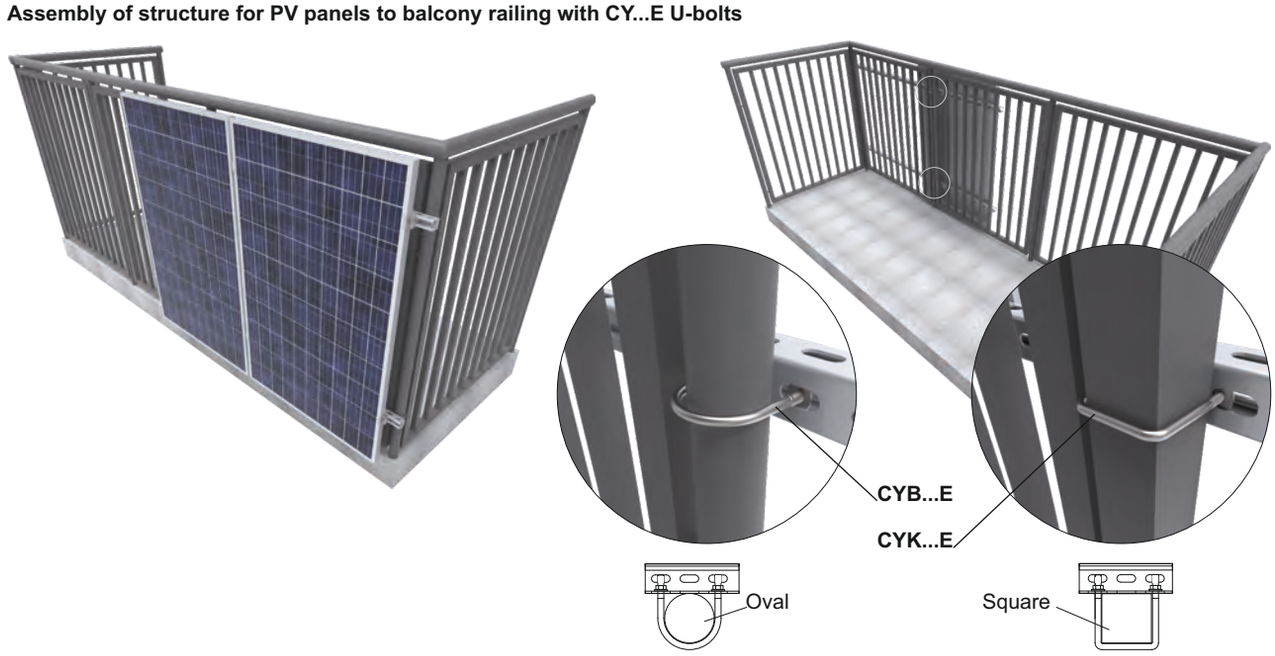
Advantages:
- **products made of stainless steel with very high corrosion resistance**
- **the sizes of U-bolts fit most of the profiles of which the balcony railings are made**
- **quick assembly of the structures to balcony railings**

ST

MATERIAL
Stainless steel

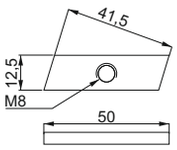
Note: orders for PV farms ≥0.5 MW delivered in collective packages

Assembly of structure for PV panels to balcony railing with CY...E U-bolts



STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Channel Nut
NRKM8PV



APPLICATION
Assembly of BUFMC holders
to CC50H35...MC profiles

NRKM8PV

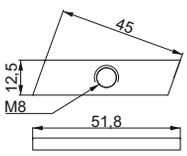
CODE	catalogue no.	pcs.
NRKM8PV	660246	100

Advantages:
- quick Installation of panel fixing clamps without the need to hold on when tightening the nuts from underneath the structure
- geometry enabling the nut to lock into the CC50H35MC profile while tightening
- made of Magnelis®-coated material with very high corrosion resistance

N STM

MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating
Available finishes:
E - Stainless steel

Channel Nut
NRM8PV



APPLICATION
Assembly of BUF... and PUF holders
to CWC100H50... profiles

NRM8PV

CODE	catalogue no.	pcs.
NRM8PV	660245	100

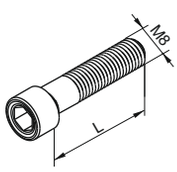
Advantages:
- quick Installation of panel fixing clamps without the need to hold on when tightening the nuts from underneath the structure
- geometry enabling the nut to lock into the CWC100H50... profile while tightening
- made of Magnelis®-coated material with very high corrosion resistance

N STM

MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating
Available finishes:
E - Stainless steel

Note: orders for PV farms ≥0.5 MW delivered in collective packages

Screw
SAM8...E



APPLICATION
Fixing screws for aluminium clamps

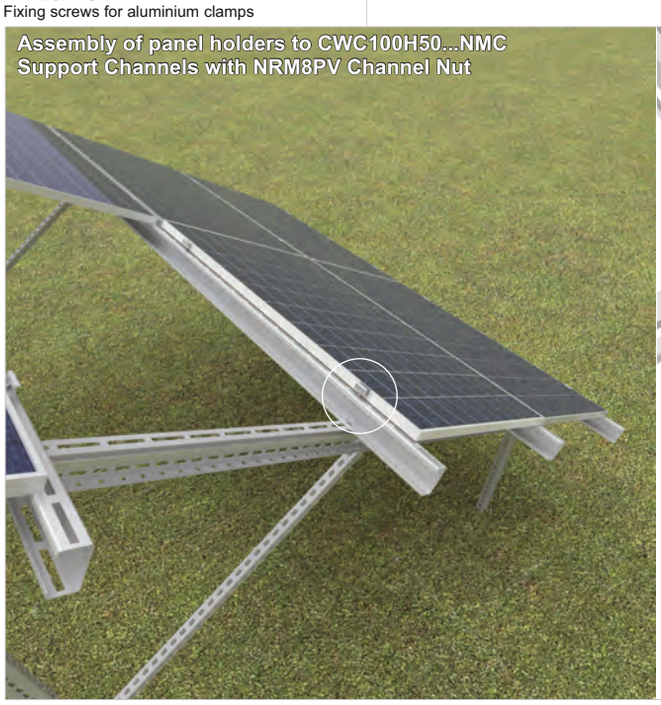
SAM8...E

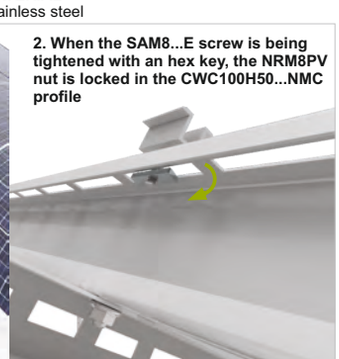
CODE	lenght L mm	catalogue no.	pcs.
SAM8x25E	25	898525	100
SAM8x30E	30	898530	100
SAM8x35E	35	898535	100
SAM8x40E	40	898540	100
SAM8x45E	45	898545	100

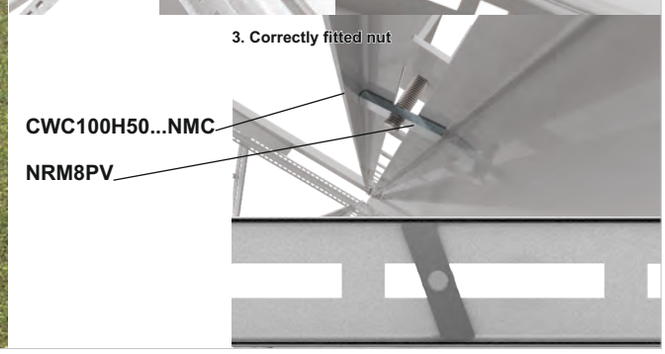
Note:
Full threads are available in dimensions ≤ 35 mm.
Partial threads are available in dimensions ≥ 40 mm.

STM

MATERIAL
Stainless steel

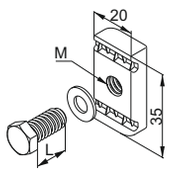






STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Screw
SRM...F



APPLICATION
Fixing the system elements to the open side of the support channels or mounting channels

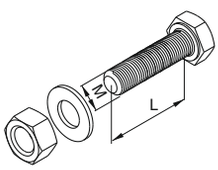
SRM...F

CODE	dimension L mm	dimension M mm	catalogue no.	pcs.
SRM8x25F	25	8	890102	100
SRM8x30F	30	8	8901024	100
SRM10x30F	30	10	6506513	100

STM

MATERIAL
Steel in zinc flake coating acc. to PN-EN ISO 10683:2014-09

Screw (set)
SMM...F



APPLICATION
Connecting structure elements

SMM...F

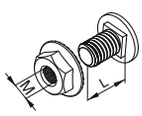
CODE	dimension M mm	lenght L mm	catalogue no.	pcs.
SMM8x60F	8	60	898660	100
SMM8x80F	8	80	650548	100
SMM10x20F	10	20	6508414	100

STM

MATERIAL
Steel in zinc flake coating acc. to PN-EN ISO 10683:2014-09

Note: orders for PV farms ≥0.5 MW delivered in collective packages

Screw (set)
SGKF...



APPLICATION
Connecting structure elements

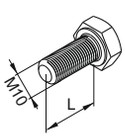
SGKF...

CODE	dimension M mm	lenght L mm	catalogue no.	set
SGKFM8x20	8	20	651820	100
SGKFM10x20PV	10	20	651641	100
SGKFM10x30	10	30	890111	100

STM

MATERIAL
Steel in zinc flake coating acc. to PN-EN ISO 10683:2014-09

Screw
SSZx20E



APPLICATION
Fixing structure elements

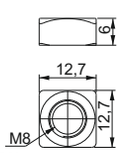
SSZ10x20E

CODE	dimension M mm	lenght L mm	catalogue no.	pcs.
SSZ10x20E	10	20	991020	100

STM

MATERIAL
Stainless steel

Square Nut
NKWM8E



APPLICATION
Fixing structure elements

NKWM8E

CODE	catalogue no.	pcs.
NKWM8E	600808	100

STM

MATERIAL
Stainless steel

Washer
PW8F

APPLICATION
Connecting structure elements

PW8F

CODE	outer diameter D mm	for the screw	catalogue no.	pcs.
PW8F	24	M8	899080	100

STM

MATERIAL
Steel in zinc flake coating acc. to PN-EN ISO 10683:2014-09

STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Nut

NS...E

APPLICATION
Connecting structure elements

NS...E

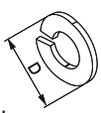
CODE	dimension M mm	catalogue no.	pcs.
NSM6E	6	652201	100
NSM8E	8	652202	100

MATERIAL
Stainless steel

STM

Spring Washer

PS...E



APPLICATION
Connecting structure elements

PS...E

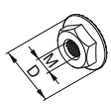
CODE	outer diameter D mm	for the screw	catalogue no.	pcs.
PS6E	11,8	M6	166991	100
PS8E	14,8	M8	166794	100

MATERIAL
Stainless steel

STM

Serrated Lock Nut

NKZ...



APPLICATION
Connecting structure elements

NKZM...F

CODE	dimension M mm	dimension D mm	catalogue no.	pcs.
NKZM6F	6	15	6500453	100
NKZM8F	8	17	6502453	100

NKZM...E

CODE	dimension M mm	dimension D mm	catalogue no.	pcs.
NKZM6E	6	15	6500451	100
NKZM8E	8	17	890008	100
NKZM10E	10	19	890009	100

MATERIAL NKZM...F
Steel in zinc flake coating acc. to PN-EN ISO 10683:2014-09

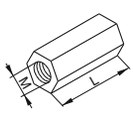
MATERIAL NKZM...E
Stainless steel

STM

Note: orders for PV farms ≥0.5 MW delivered in collective packages

Rod Connector

NLM6E



APPLICATION
Connecting threaded rods of identical diameters

NLM6E

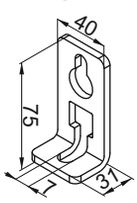
CODE	dimension M mm	lenght L mm	catalogue no.	pcs.
NLM6	6	18	651103	100

MATERIAL
Stainless steel

STM

Rod Hanger

WPTMC



APPLICATION
Fixing threaded rods as bracings for bifacial structures

WPTMC

≠ 3,0 mm

CODE	1 pcs	catalogue no.	pcs.
WPTMC	0,11	731305	50

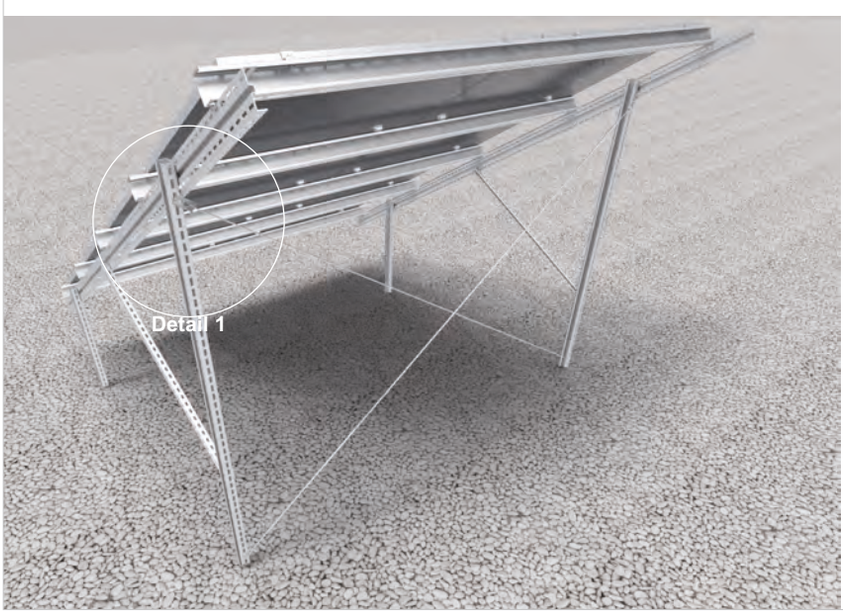
Advantages:
- special cut-outs allowing holder to be fitted on the threaded rod with pre-fitted nuts
- made of Magnelis®-coated material with very high corrosion resistance

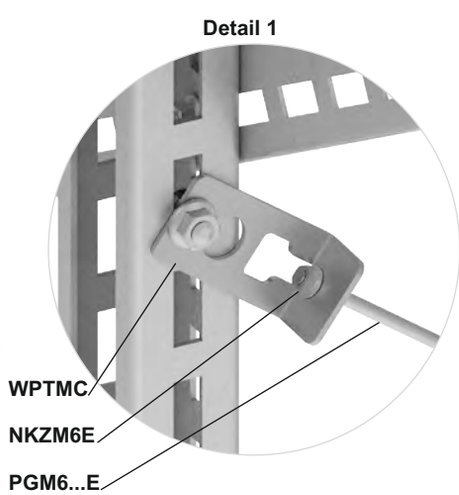
MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating
Available finishes:
E - Stainless steel

N

STM

Assembly of bracings with WPTMC rod hanger



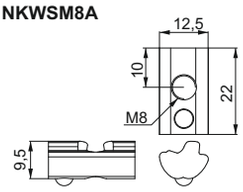


STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Slide Nut with a Ball

NKWSM8A



NKWSM8A

CODE	catalogue no.	pcs.
NKWSM8A	600909	200

Optimum torque = 15 Nm

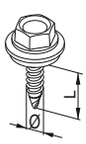
STM

APPLICATION
Fixing system elements to aluminium profiles

MATERIAL
Aluminium (EN AW-6061)

Self-drilling Screw with EPDM

SMDP6,0x25E



SMDP6,0x25E

CODE	dimension Ø mm	lenght L mm	catalogue no.	pcs.
SMDP6,0x25E	6	25	894824	200

Advantages:
- made of bimetal: steel + stainless steel + zinc flake coating
- fine thread for increased pull-out strength

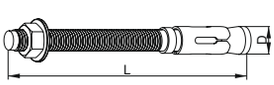
STM

APPLICATION
Assembly of roof fixings and mounting rails for roofs covered with trapezoidal metal sheet

MATERIAL
Stainless steel

Anchor Bolt

PSR...F



PSR...F

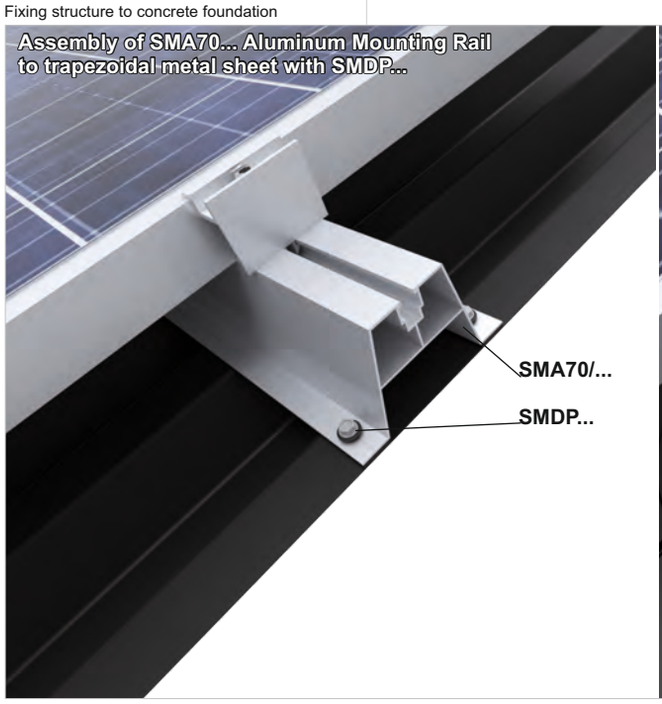
CODE	dimension D mm	lenght L mm	catalogue no.	pcs.
PSRM8x75F	8	75	650875	100
PSRM10x90F	10	90	650093	100
PSRM12x110F	12	110	651211	100

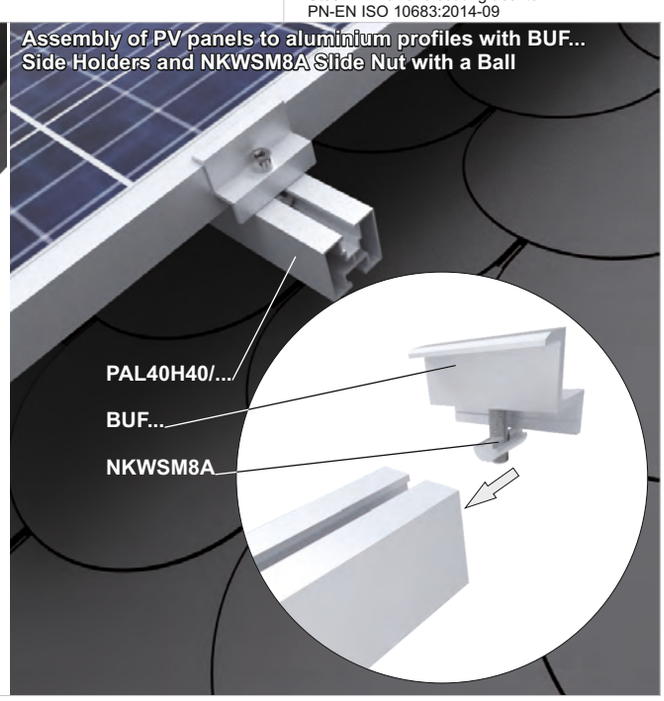
STM

APPLICATION
Fixing structure to concrete foundation

MATERIAL
Steel in zinc flake coating acc. to PN-EN ISO 10683:2014-09

Note: orders for PV farms ≥0.5 MW delivered in collective packages

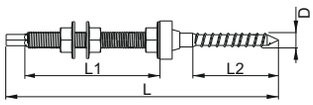




STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Screw - Double Thread

SWD...E



SWD...E

CODE	dimension D mm	lenght L mm	dimension L1 mm	dimension L2 mm	catalogue no.	pcs.
SWDM10x200E	10	200	100	70	898820	1
SWDM10x250E	10	250	140	80	898825	1
SWDM10x300E	10	300	170	100	898830	1
SWDM12x300E	12	300	170	100	898831	1

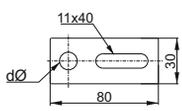
STM

APPLICATION
Fixing structure to roof rafters

MATERIAL
Stainless steel

Mounting Adapter

AD...E



AD...E

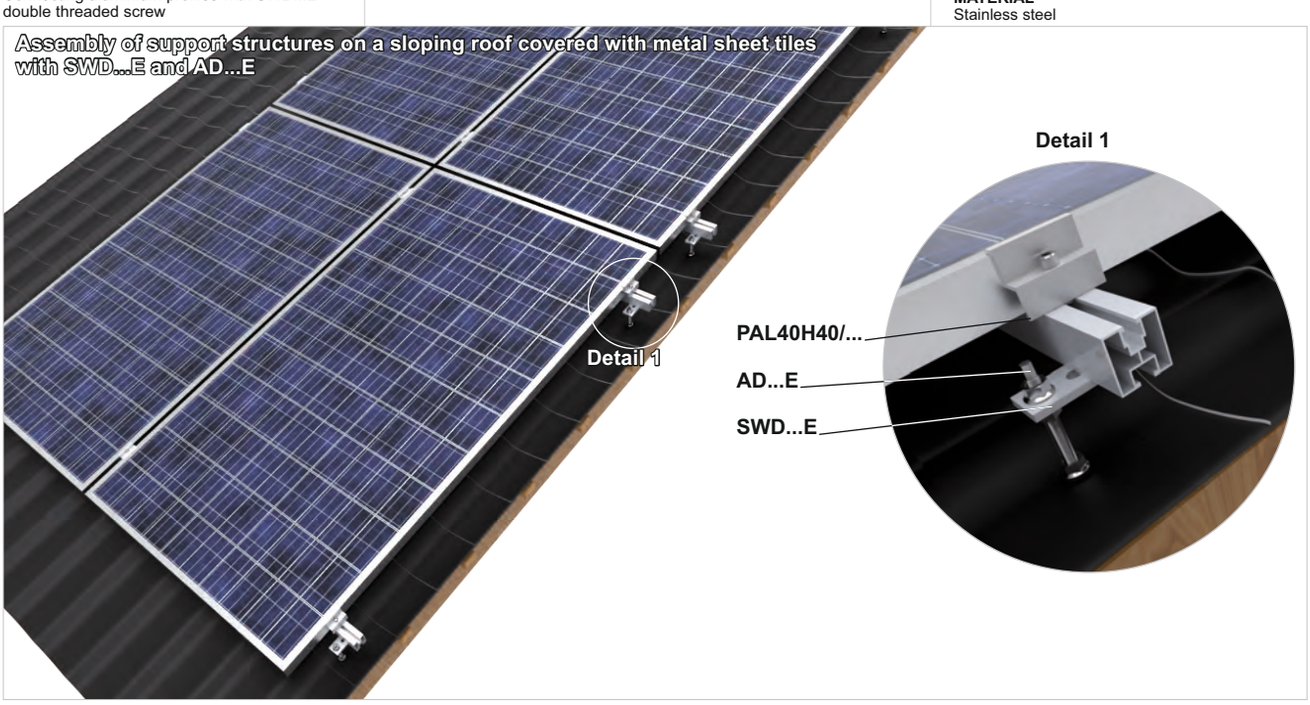
≠ 5,0 mm

CODE	dimension dØ mm	catalogue no.	pcs.
AD11E	11	898311	1
AD13E	13	898312	1

STM

APPLICATION
Connecting aluminium profiles with SWD...E double threaded screw

MATERIAL
Stainless steel

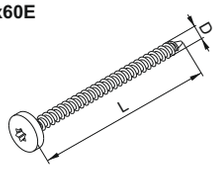


STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

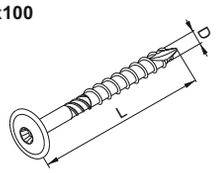
Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Wood Screw

DDW6x60E



DDW8x100



APPLICATION
Fixing the DUR40E and DUF75E fixings to the rafters that constitute the roof structure

DDW...

CODE	dimension D mm	lenght L mm	catalogue no.	pcs.
DDW6x60E	6	60	**890661**	100
DDW8x100	8	100	**890810**	100
DDW8x100E	8	100	**890811**	100

STM

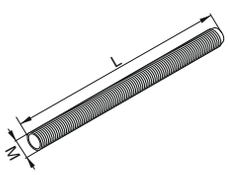
MATERIAL for DDW6x60E and DDW8x100E
Stainless steel

STM

MATERIAL for DDW8x100
Steel, electrogalvanized

Threaded Rod

PGM6...E



APPLICATION
Fixing structure

PGM6...E

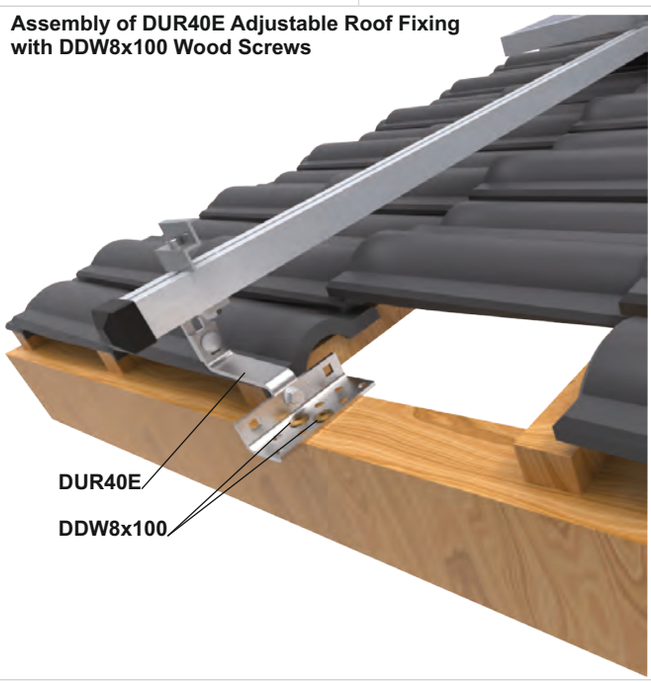
CODE	thread M mm	lenght L mm	tensile strength [kN]	1 pcs. kg	catalogue no.	pcs.
PGM6/1E	6	1000	8,44	0,12	**652110**	25
PGM6/2E	6	2000	8,44	0,23	**652120**	25
PGM6/3E	6	3000	8,44	0,35	**650400**	25

material class 5.8

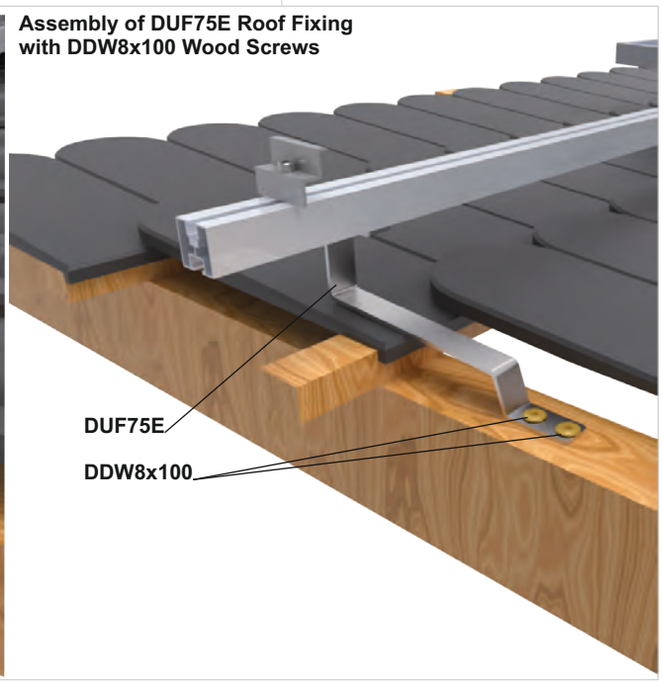
STM

MATERIAL
Stainless steel

Assembly of DUR40E Adjustable Roof Fixing with DDW8x100 Wood Screws



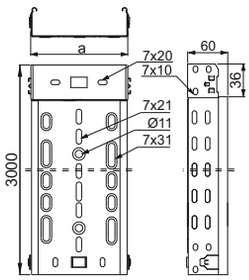
Assembly of DUF75E Roof Fixing with DDW8x100 Wood Screws



STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Cable Tray

KF.../3MC



KFL...H60/3MC

≠ 0,7 mm

CODE	width a mm	kg 1 m	catalogue no.	pcs./m
KFL50H60/3MC	50	0,98	**1610235**	4/12
KFL100H60/3MC	100	1,17	**1612235**	4/12

Advantages:
- quick and easy assembly
- stable snap connection
- deep hole embossments on the bottom increase the cable tray strength
- dense perforation with embossments ensures excellent heat exchange and is designed to allow the installation of the cable tray on BAKS bracket at any location
- Ø11 holes in the bottom of the cable tray enable suspension on a threaded rod

Note:
For large orders over 1000 m producing cable trays with the length of 6 m possible on request

Note:
Producing cable trays with the thickness of 1,0 mm possible on request

For assembly use SGKFM6x12 or SGM6x12F Screw Sets

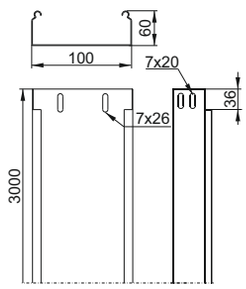
N STM

APPLICATION
Cable routing

MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Cable Tray

KB...3MC



KBL100H60/3MC

≠ 0,7 mm

CODE	width a mm	kg 1 m	catalogue no.	pcs./m
KBL100H60/3MC	100	1,34	**1620105**	4/12

Possibility of joining cable trays together through sliding one into another and connector-free assembly.

Note:
For large orders over 1000 m producing cable trays with the length of 6 m possible on request

Note:
Producing cable trays with the thickness of 1,0 mm possible on request

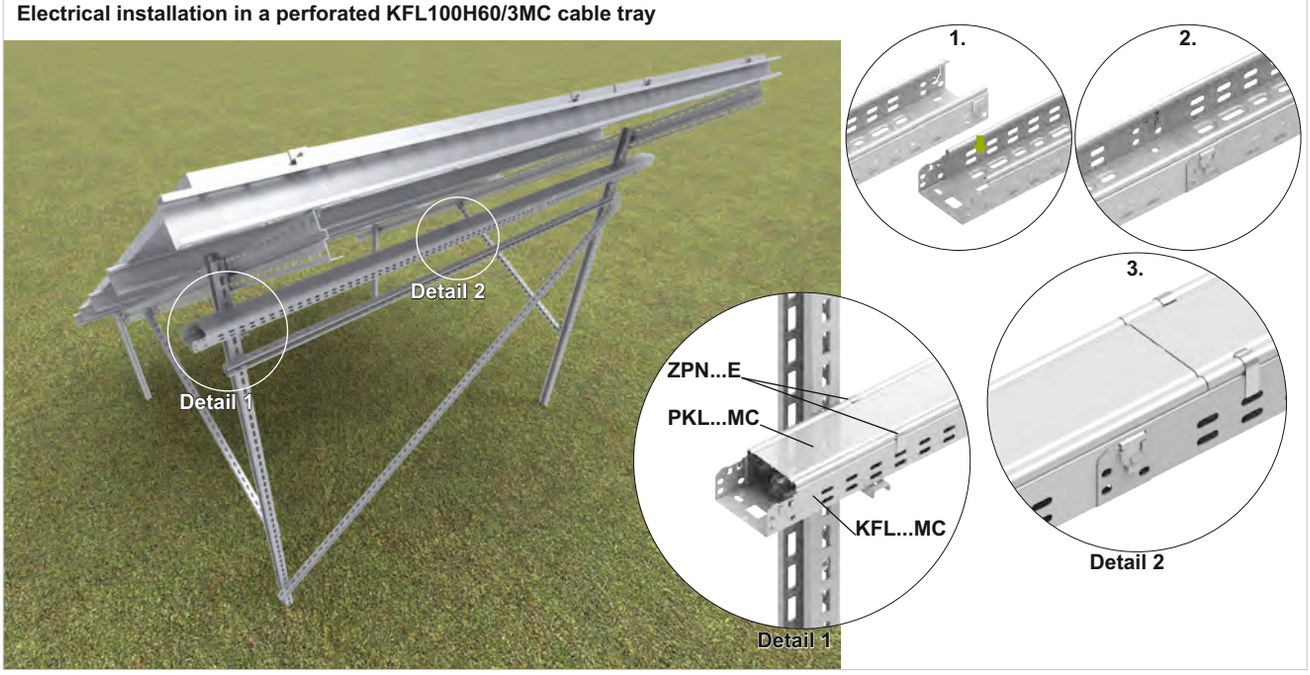
For the assembly use SGKFM6x12 or SGM6x12F Screw Sets

N STM

APPLICATION
Cable routing

MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Electrical installation in a perforated KFL100H60/3MC cable tray

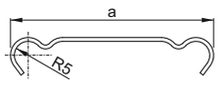


STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Full range of products available in the main BAKS catalogue and on the website www.baks.com.pl/en/

Cover
PK.../3MC



APPLICATION
Protection of cables against damage

PKL.../3MC

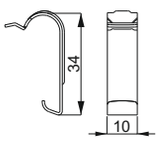
≠ 0,7 mm

CODE	width a mm	lenght L mm	1 m kg	catalogue no.	pcs./m
PKL50/3MC	50	3000	0,42	1006055	10/30
PKL100/3MC	100	3000	0,72	1006105	10/30

N
STM

MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Cover Clamp
ZPNNH60E



APPLICATION
Prevents the cover from slipping

ZPNNH60E

CODE	catalogue no.	pcs.
ZPNNH60E	140006	100

STM

MATERIAL
Band in zinc flake coating acc.
to PN-EN ISO 10683:2014-09
Stainless steel band (ZPN E)

Edge Protection Strip
TOZ

APPLICATION
Protection of cables against sharp edges
in cable trays

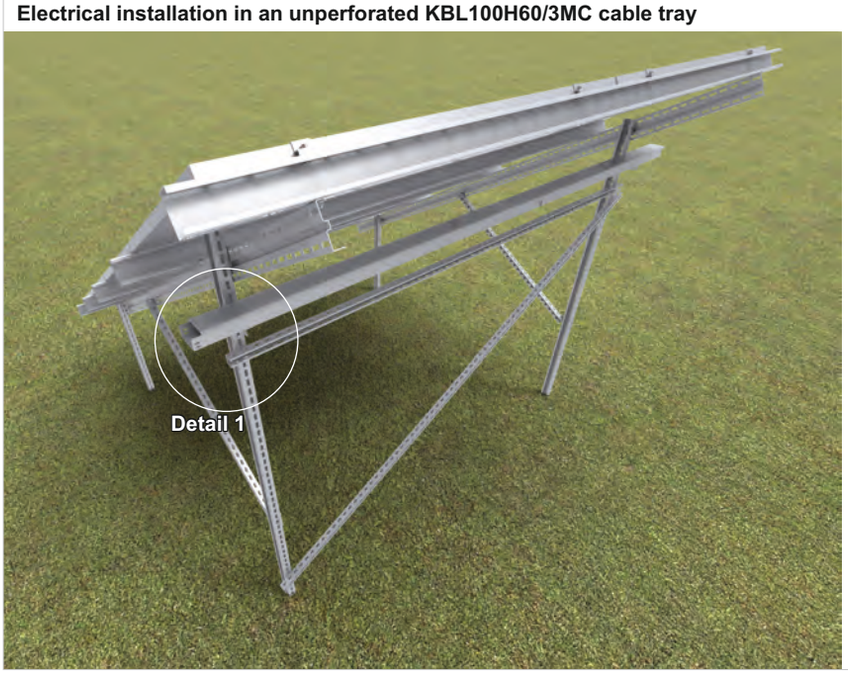
TOZ

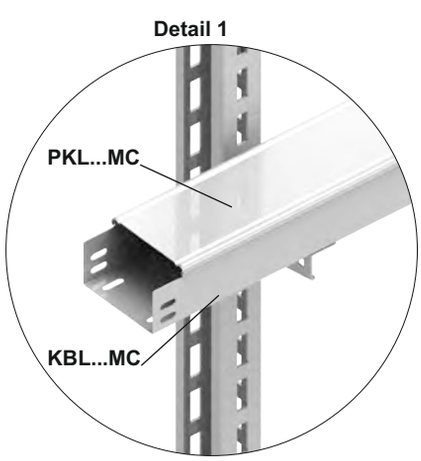
CODE	catalogue no.	m
TOZ	100800	10

STM

MATERIAL
Polyvinyl chloride. Reinforcement tape.
Colour: light grey.

Electrical installation in an unperforated KBL100H60/3MC cable tray



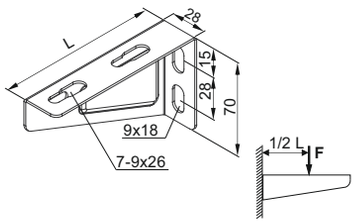


STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Full range of products available in the main BAKS catalogue
and on the website www.baks.com.pl/en/

Bracket
WWS...MC



APPLICATION
Fixing cable trays

WWS...MC

± 1,5 mm

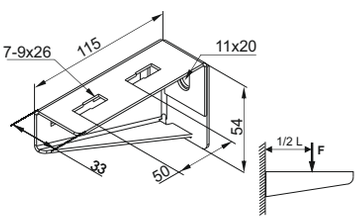
CODE	lenght L [mm]	maximum load F_{max}[kN]	1 pcs kg	catalogue no.	pcs.
WWS100MC	110	0,90	0,19	7105105	50
WWS150MC	160	1,00	0,21	7105155	50

Advantages:
- high strength parameters
- made of Magnelis®-coated material with very high corrosion resistance

STM

MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Bracket
WWSR100MC



APPLICATION
Fixing cable trays

WWSR100MC

± 2,0 mm

CODE	maximum load F_{max}[kN]	1 pcs kg	catalogue no.	pcs.
WWSR100MC	1,20	0,20	7518105	50

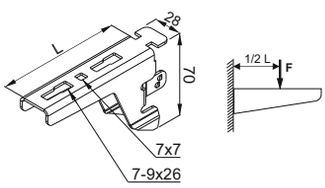
Advantages:
- high strength parameters
- mounted with single screw
- made of Magnelis®-coated material with very high corrosion resistance

N

STM

MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Snap Bracket
WSZ...NMC



APPLICATION
Installation of cable trays to rear support posts of PV structures

WSZ...NMC

± 2,0 mm

CODE	lenght L [mm]	maximum load F_{max}[kN]	1 pcs. kg	catalogue no.	pcs.
WSZ100NMC	110	1,30	0,14	801105	100
WSZ150NMC	160	1,20	0,21	801155	100

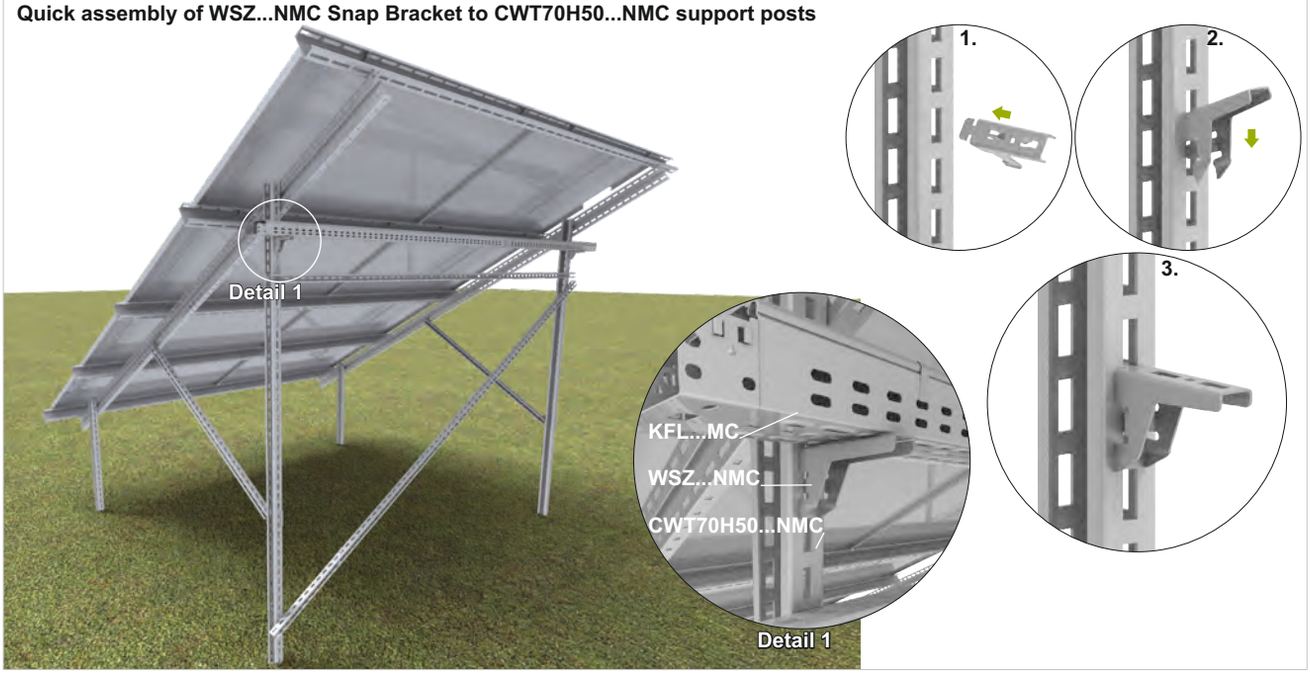
Advantages:
- high strength parameters
- quick assembly
- suitable for CT70H50/...NMC, CWT70H50/...NMC and CWE100H50/...NMC profiles
- made of Magnelis®-coated material with very high corrosion resistance

N

STM

MATERIAL
S250GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Quick assembly of WSZ...NMC Snap Bracket to CWT70H50...NMC support posts



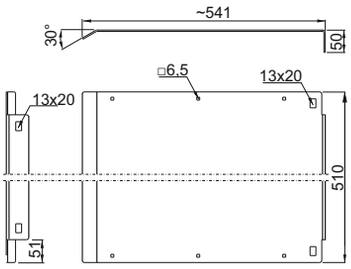
STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Full range of products available in the main BAKS catalogue and on the website www.baks.com.pl/en/

Inverter Cover

DI



APPLICATION
Protecting inverter against rain, snow, mechanical damages, etc.

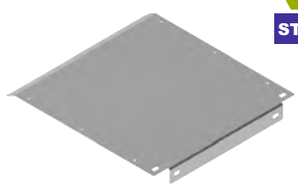
DI

≠ 3,0 mm

CODE	kg 1 pcs.	catalogue no.	pcs.
DI	6,97	895002	1

Advantages:
- protecting inverter against rain, snow and mechanical damages
- high strength parameters
- easy and quick assembly
- possibility to extend the cover with other modules to create any width adapted to the inverter
- made of Magnelis®-coated material with very high corrosion resistance

For the assembly use:
- min. 2 x SGKFM10x20PV Screw Sets

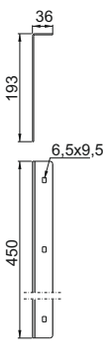


N STM

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Inverter Cover Side

BDI



APPLICATION
Stiffening the cover, inverter side cover

BDI

≠ 2,0 mm

CODE	kg 1 pcs.	catalogue no.	pcs.
BDI	1,60	895003	1

Advantages:
- protecting inverter against rain, snow and mechanical damages
- high strength parameters
- easy and quick assembly
- possibility to extend the cover with other modules to create any width adapted to the inverter
- made of Magnelis®-coated material with very high corrosion resistance
- symmetrical shape allowing installation on the left and right side of the cover

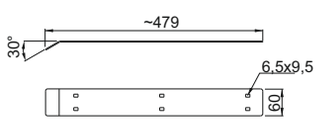
For the assembly use:
- min. 3 x SGKFM6x12 Screw Sets

N STM

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Inverter Cover Connector

LDI



APPLICATION
Connecting inverter covers

LDI

≠ 2,0 mm

CODE	kg 1 pcs.	catalogue no.	pcs.
LDI	0,45	895004	1

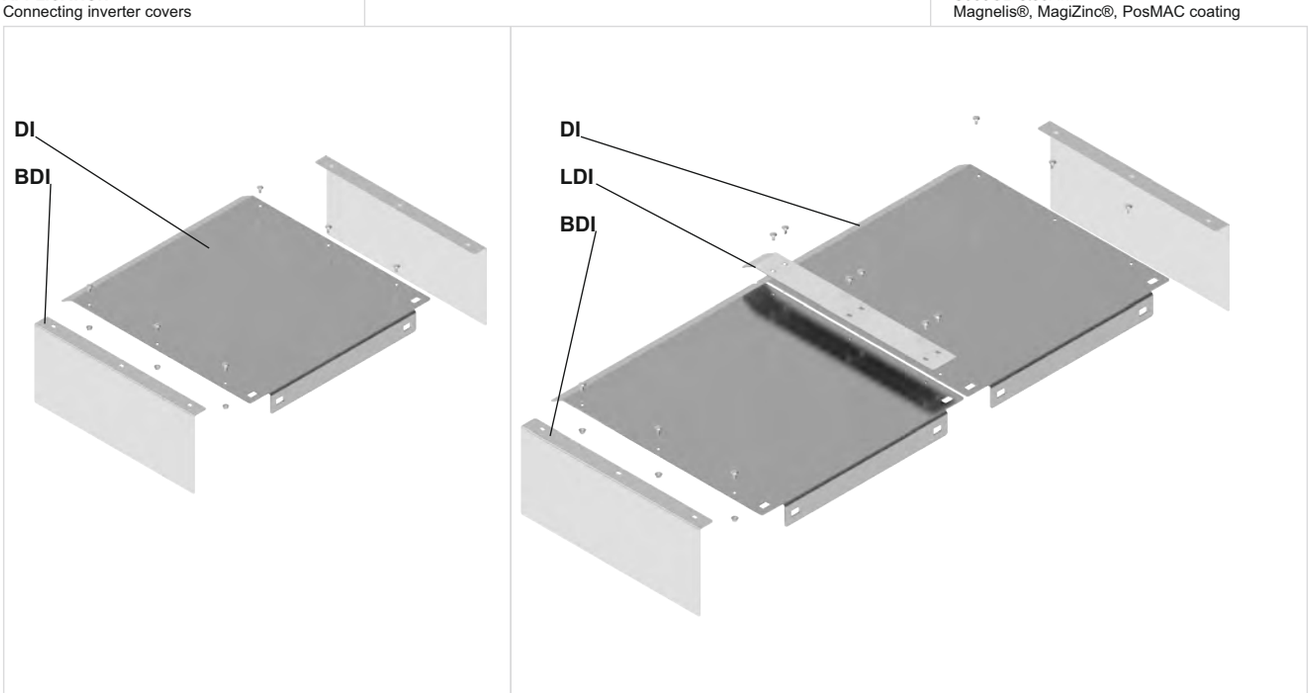
Advantages:
- protecting inverter against rain, snow and mechanical damages
- high strength parameters
- easy and quick assembly
- possibility to extend the cover with other modules to create any width adapted to the inverter
- made of Magnelis®-coated material with very high corrosion resistance
- stable connection of two covers for tightness

For the assembly use:
- min. 6 x SGKFM6x12 Screw Sets

N STM

MATERIAL
S350GD steel in:
Magnelis®, MagiZinc®, PosMAC coating

Note: orders for PV farms ≥0.5 MW delivered in collective packages

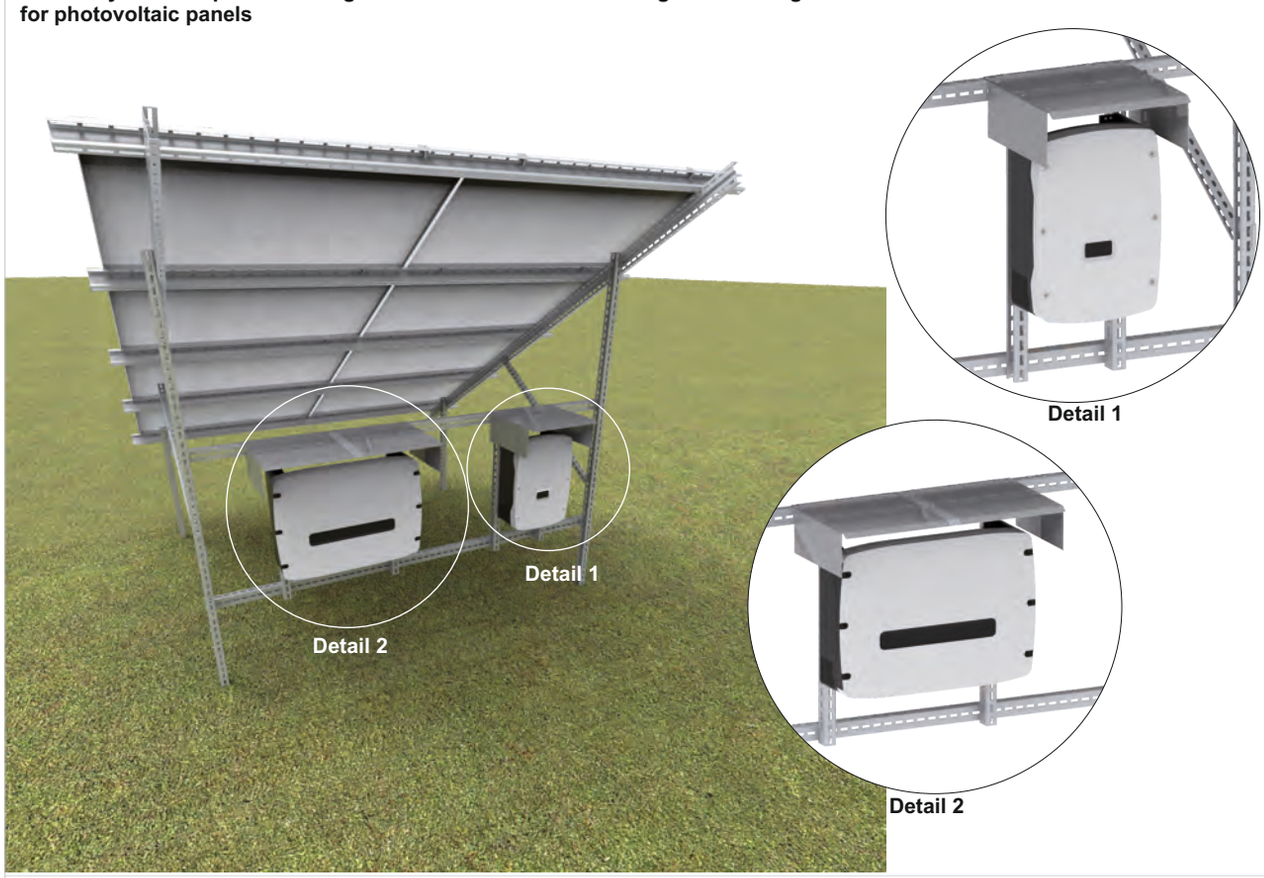


STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product

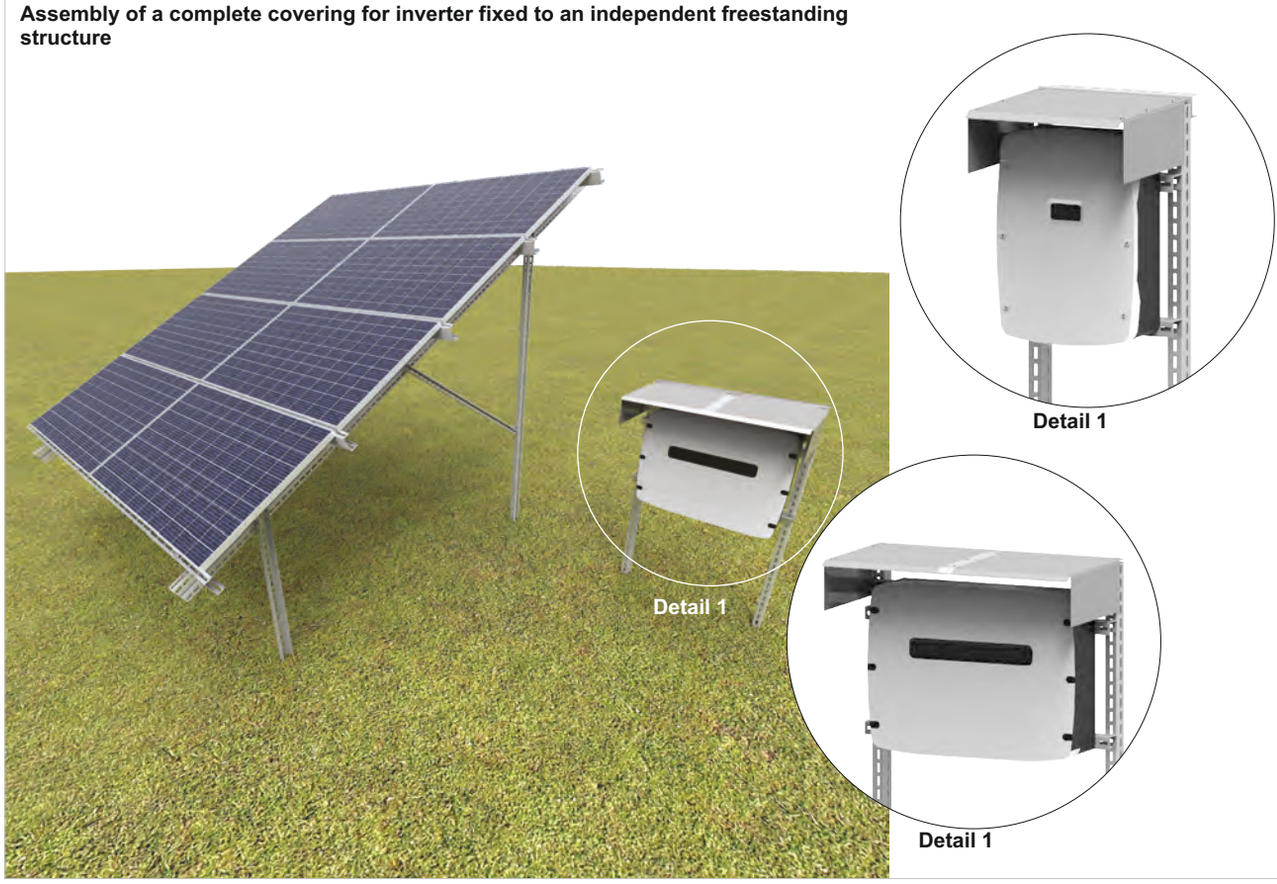
Sheet thickness ≠ [mm]: 1,0 | 1,2 | 1,5 | 2,0 | 3,0 | 4,0

Full range of products available in the main BAKS catalogue and on the website www.baks.com.pl/en/

Assembly of a complete covering for inverter fixed to an existing freestanding structure for photovoltaic panels



Assembly of a complete covering for inverter fixed to an independent freestanding structure



Zinc Paste

WSZINK...

APPLICATION
Protecting cut edges against corrosion

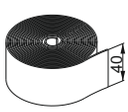
WSZINK

CODE	ml. 1 pcs	catalogue no.	pcs.
WSZINK1000	1000	**650001**	1
WSZINK250	250	**650002**	1

STM

Cellular Rubber

EPDMW2x40



APPLICATION
Sealing the connections of metal roofing sheets with UBT... Roof Fixings

EPDMW2x40

CODE	catalogue no.	m
EPDMW2x40	**890000**	10

STM

MATERIAL
EPDM elastomer

Injection Mortar

ZIO...

A set includes:
1 container 300 ml or 410 ml+ 2 mixers

APPLICATION
Fixing steel structures, rails, racks, consoles, gates, facades, window elements to: solid brick, chequer brick, solid lime-sand blocks, lightweight and cellular concrete, lime-sand and ceramic blocks, and in cracked and non-cracked concrete

ZIO...

CODE	Qty: ml	kg 1 pcs.	catalogue no.	set
ZIO300	300	0,5	**653902**	1
ZIO410	410	0,7	**653910**	1

Note:
Styrene free injection mortar, to be used with standard silicone pistols

Advantages:
High hybrid resistance of heavy-load mortar for all types of construction materials. A universal assembly system for any site. Designed for anchoring of reinforcement bars. First injection system with approval for concrete, anchoring of reinforcement bars, solid and hollow blocks, and cellular concrete.

Setting time

Packing temperature (mortar)	Gelating (mounting) time	Substrate temperature	Setting time
		-5°C - 0°C	24 h
0°C- +5°C	13 min.	0°C- +5°C	3 h
+ 5°C- +10°C	9 min.	+ 5°C- +10°C	90 min.
+10°C- +20°C	5 min.	+10°C- +20°C	60 min.
+20°C- +30°C	4 min.	+20°C- +30°C	45 min.
+30°C- +40°C	2 min.	+30°C- +40°C	30 min.

STM

MATERIAL
BStyrene-free, hybrid vinylester mortar
On request:
Double squeezer for ZIO410

STM - Standard stock product (available in stock)
ST - Standard product (on order)
N - New product