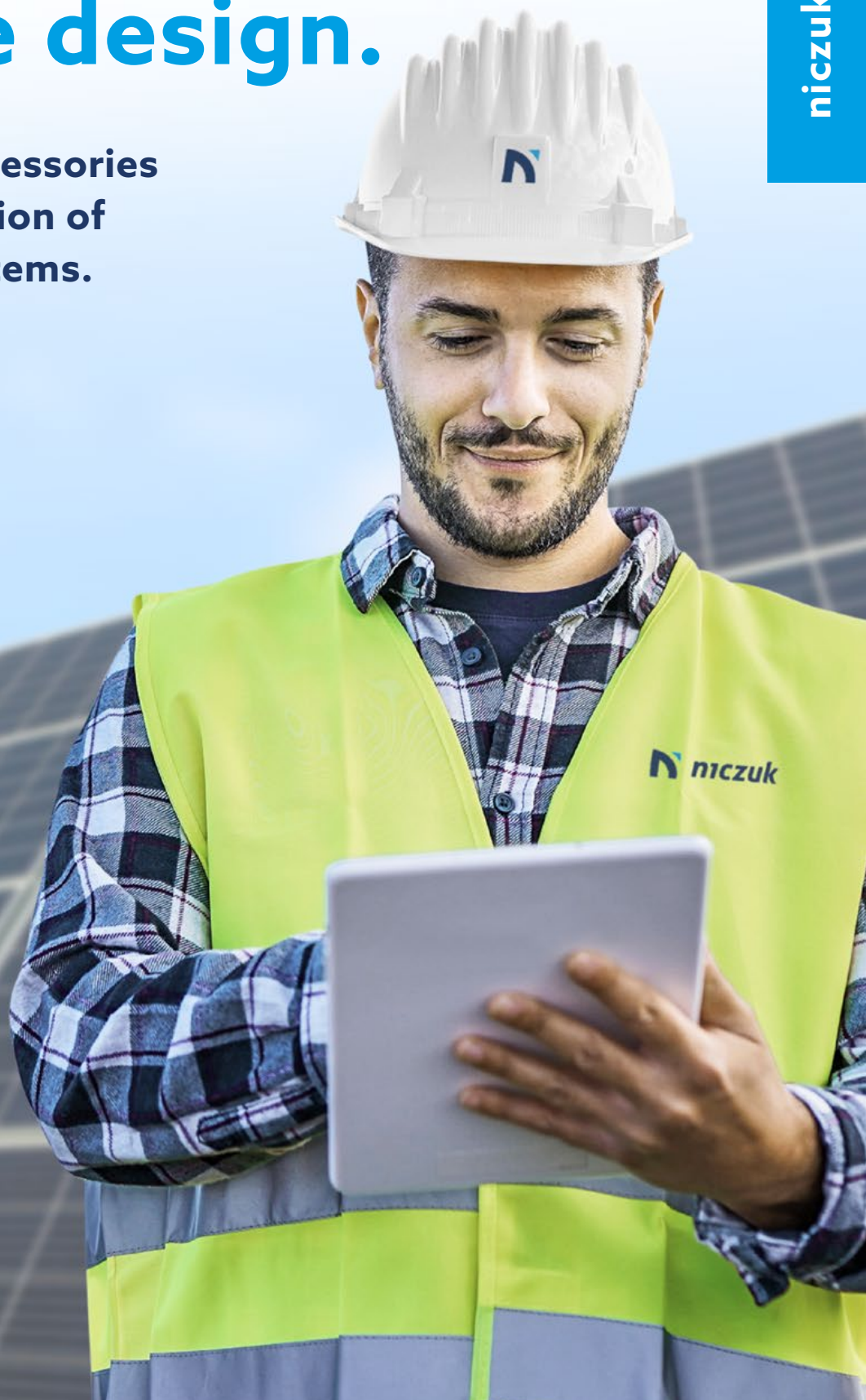
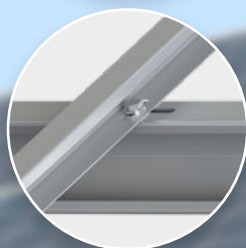


Go with **reliable design.**

**Channels and accessories
for the construction of
photovoltaic systems.**



 niczuk rackta VN3H CE

We have been focusing on reliability **for 67 years.**

THALE sp. z o.o. sp.k., owner of the Niczuk brand, is today the leader of the Polish market for fixings for building installations. Over 67 years of uninterrupted business and 30 years of experience in the industry, confirmed by cooperation with hundreds of installers, are guarantees of stable partnership and high quality of products. To meet the needs of the ever-growing market for photovoltaic installations and using our knowledge of building installation construction, we have developed a new product line called Rackta.



67 years
of experience



Technical
support



Guarantee
of reliability



Eco
responsible



Continuity
of supply



What distinguishes the Rackta system?



FEATURES	BENEFITS
Magnelis® coating	Superior corrosion protection
Quality confirmed by many years of experience	Warranty of up to 25 years*
High-quality steel – S350GD, S320GD	High structural strength
Proprietary solutions on a market scale	Ease of installation and warranty services
The largest design office in the country	Technical support at every stage of cooperation
Dedicated advisory team	Individual approach to customers
Structures designed in accordance with standards: PN-EN 1090, PN-EN 1990, PN-EN 1991-1-1, PN-EN 1991-1-3, PN-EN 1991-1-4	Confirmation of reliability and safety
Factory Production Control System (ZKP) in accordance with EN 1090-1, and management system with complete welding quality requirements in accordance with EN ISO 3834-2, CE-marked products	Guarantee of compliance with EU laws and regulations
ISO 9001 management systems	Quality assurance system

* Check the warranty conditions

Rackta product line.

The Rackta line consists of profiles and accessories dedicated to the construction of photovoltaic installations. The range of these products enables stable and easy-to-install structures to be built for both large-scale farms and micro photovoltaic installations. The Rackta portfolio also includes carports and structures designed for mounting panels on facades. Elements of the Rackta line have been designed according to basic principles that guarantee an edge over the European competition, such as:



✓ More stable construction

The use of higher strength steel together with the innovative shape of the profiles guarantees the stability of the structure. The resulting stiffness of the profiles increases resistance to snow load and wind force. The Rackta system meets the legal and design requirements for steel constructions applicable on the European market. The Magnelis® coating is the highest corrosion protection for the entire structure, enabling a 25-year warranty to be maintained with annual maintenance.

✓ Reduced construction complexity

Rackta's range includes more than 120 construction configurations consisting of only three types of profile. The specially developed hole pattern reduces the need to drill the profiles on site, thus minimising the risk of damage to the anti-corrosion coating. The use of longitudinal holes increases the tolerance (20 mm) when driving the posts into the ground. Such a solution facilitates assembly and ensures that the structure is aligned in a straight line, guaranteeing a highly aesthetic and cultured installation.

✓ Simplicity of installation

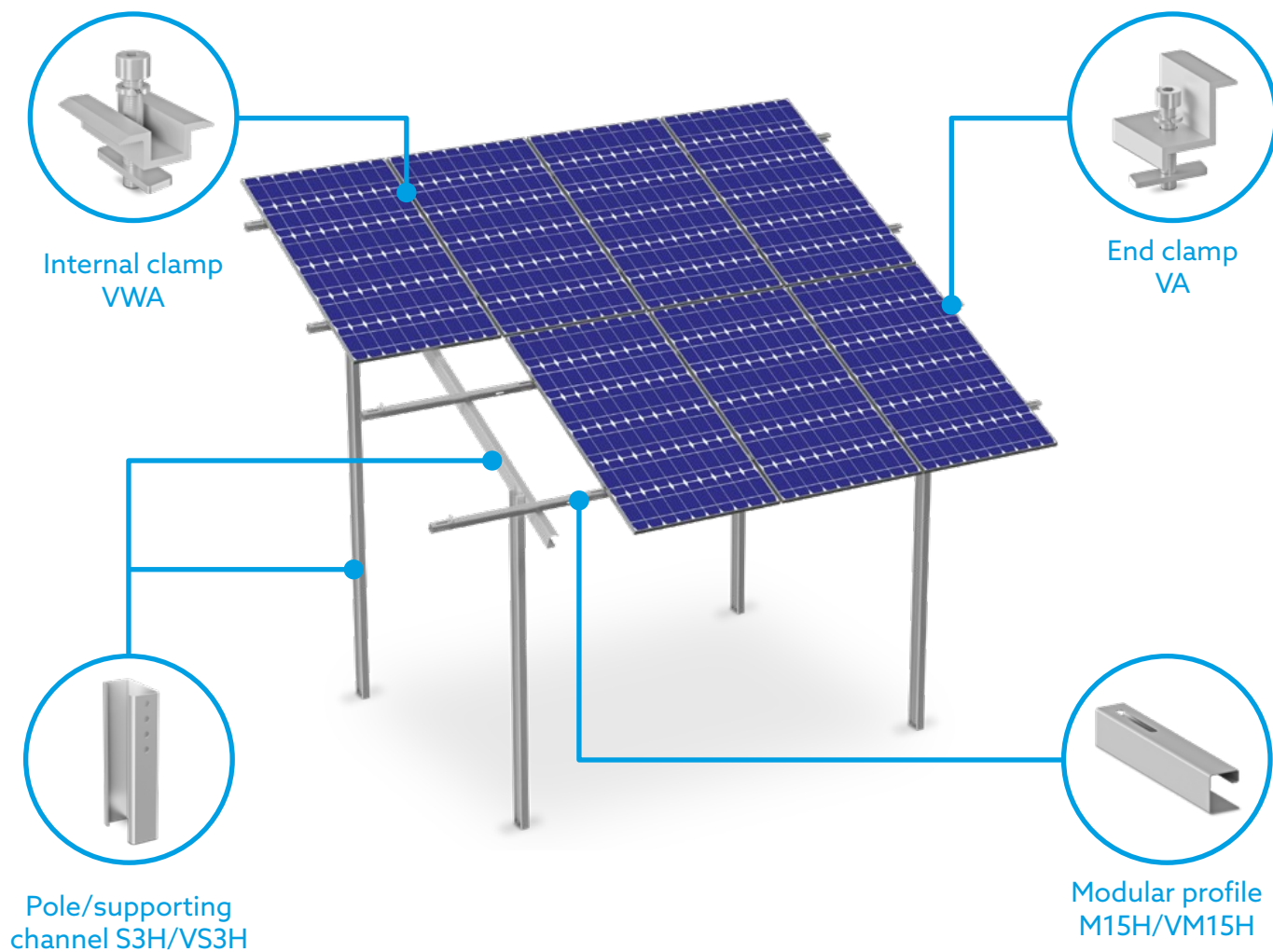
The shape of the profiles facilitates free access to each fixing point of the structure and significantly reduces installation time. The use of Rackta system-compatible connectors increases the comfort of the installer's work. Rackta also offers kits for the installation of the inverter and other technical installation equipment.

✓ Easy maintenance

The unique solutions of Rackta's design elements, such as the profile cross-section, guarantee a fast and reliable service inspection. All critical components of the system are visible, allowing them to be visually inspected without dismantling the individual components. The shape of the profiles and the position of their connections reduce the risk of damage during inspection.

Construction for 8 panels in a vertical arrangement expandable

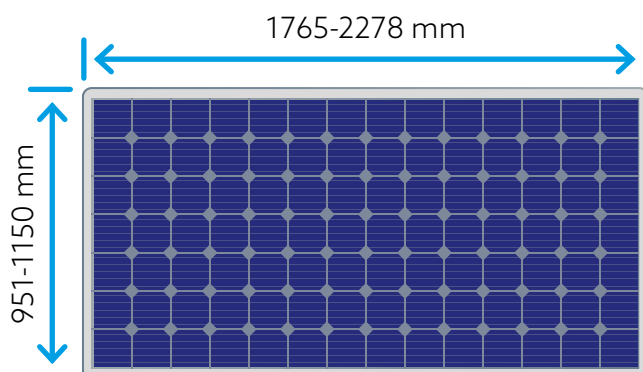
Number of poles	4
Number of supporting profiles	2
Number of modular profiles	4
Angle of inclination	25°



Components

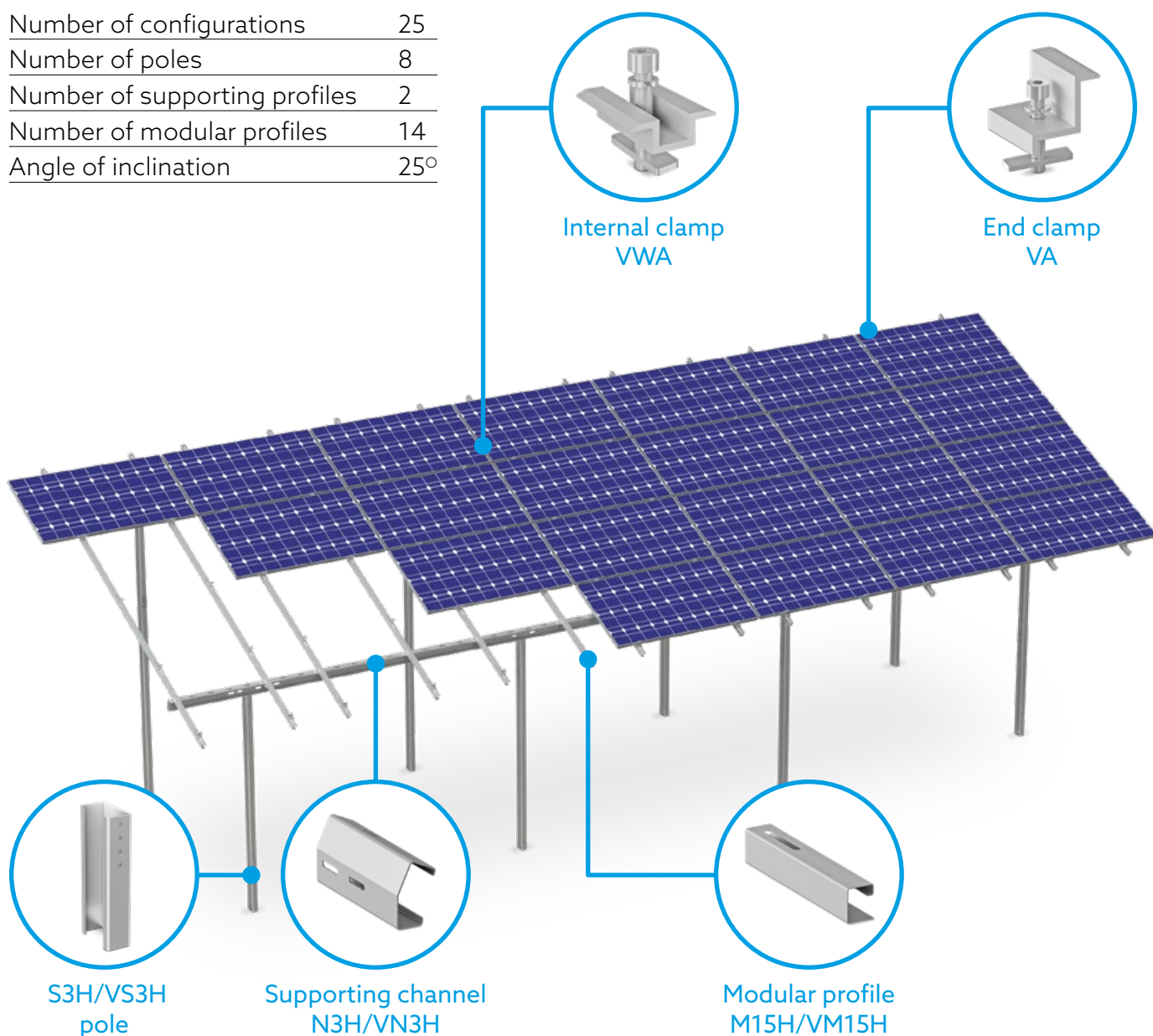
- S3H/VS3H columns
- Modular channels M15H/VM15H
- Internal and end clamps
- Screw assemblies VNZ8I8L3 and VNZ8I8L6
- Screw set VNZ812

Range of panels



Construction for 28 panels in a horizontal arrangement

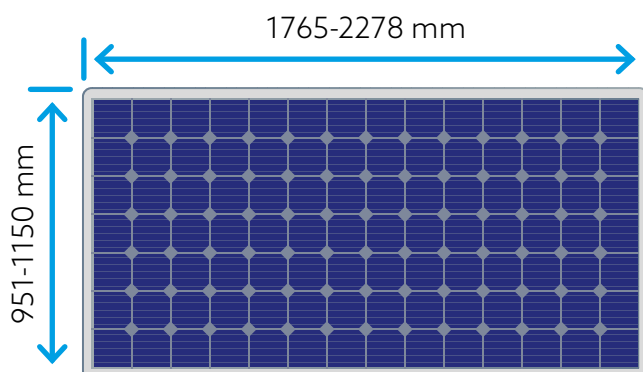
Number of configurations	25
Number of poles	8
Number of supporting profiles	2
Number of modular profiles	14
Angle of inclination	25°



Components

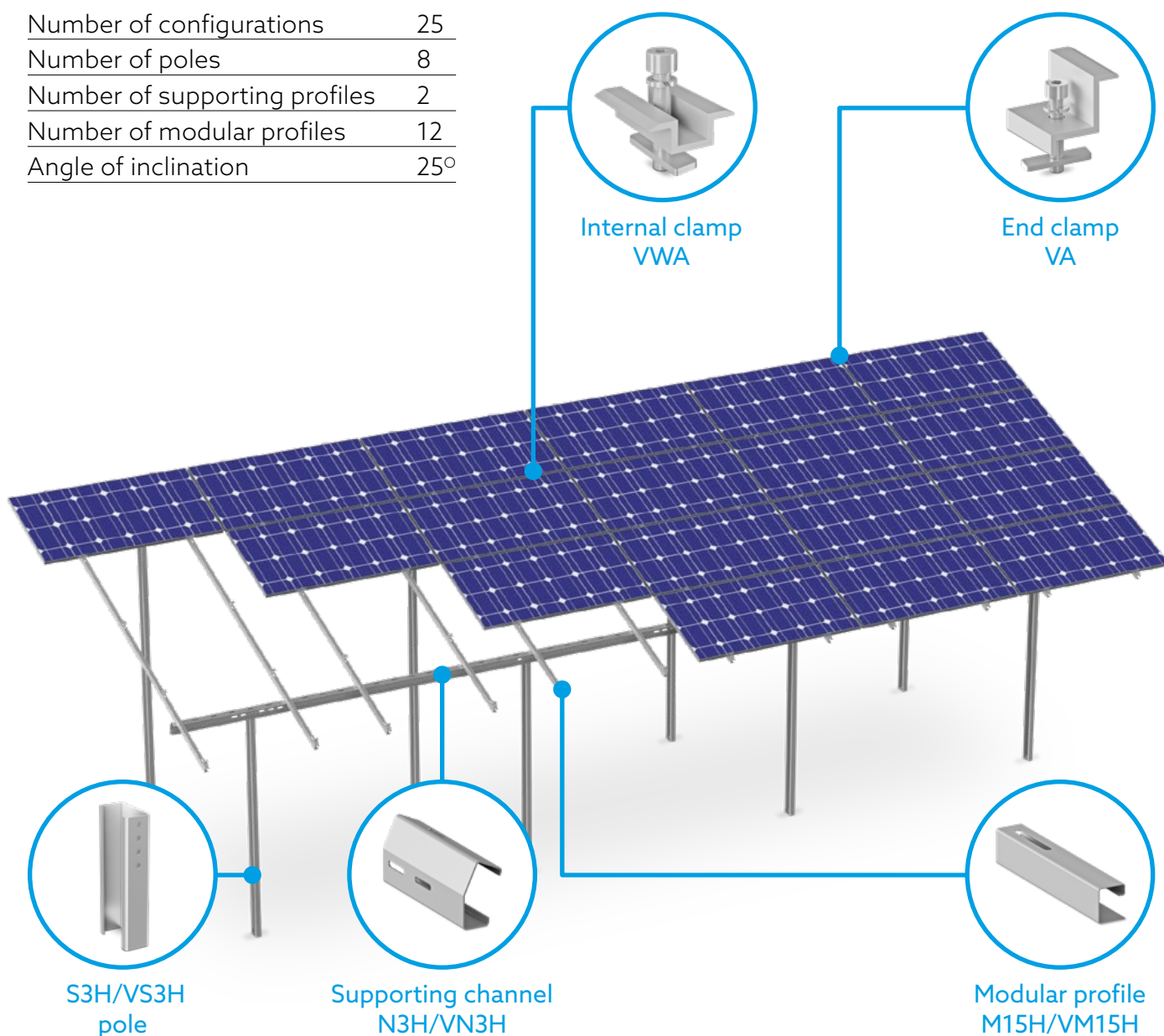
- S3H/VS3H columns
- Carrier channel N3H/VN3H
- Modular channels M15H/VM15H
- Internal and end clamps
- Screw assemblies VNZ8I8L3 and VNZ8I8L6
- Screw set VNZ812

Range of panels



Construction for 24 panels in a horizontal arrangement

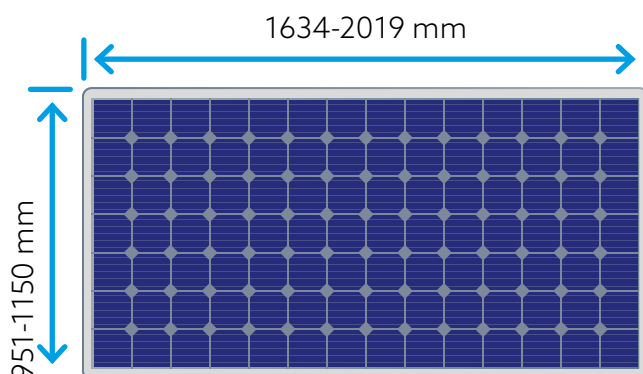
Number of configurations	25
Number of poles	8
Number of supporting profiles	2
Number of modular profiles	12
Angle of inclination	25°



Components

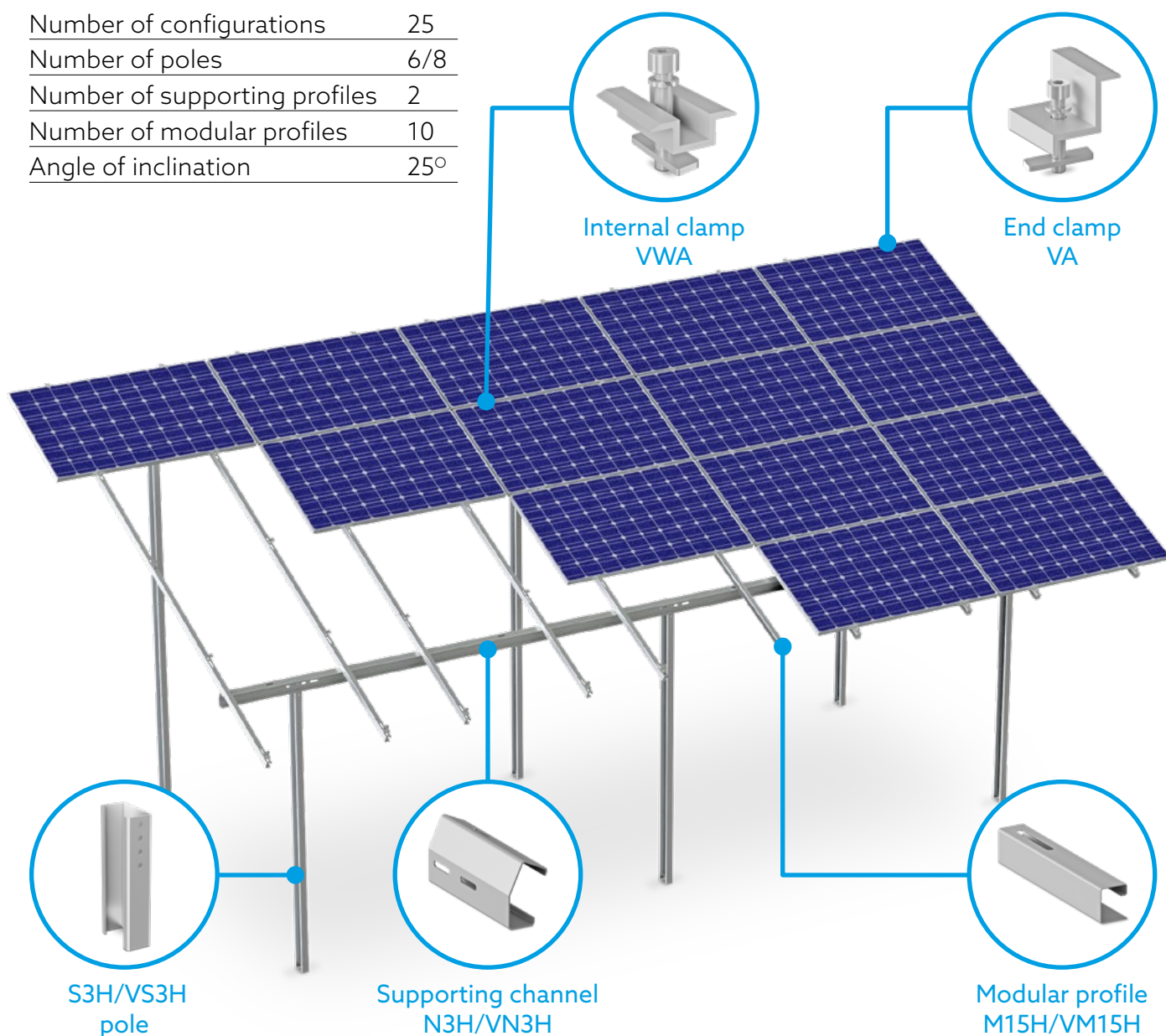
- S3H/VS3H columns
- Carrier channel N3H/VN3H
- Modular channels M15H/VM15H
- Internal and end clamps
- Screw assemblies VNZ8I8L3 and VNZ8I8L6
- Screw set VNZ812

Range of panels



Construction for 20 panels in a horizontal arrangement

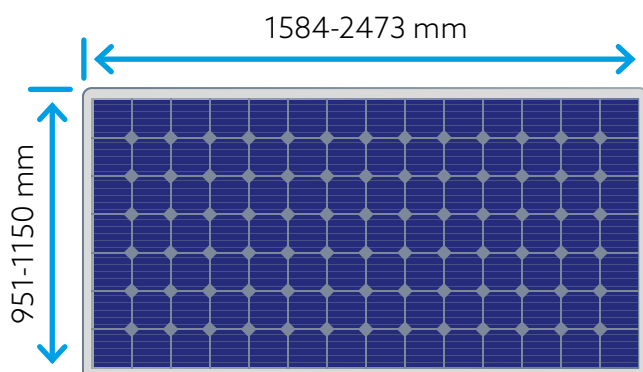
Number of configurations	25
Number of poles	6/8
Number of supporting profiles	2
Number of modular profiles	10
Angle of inclination	25°



Components

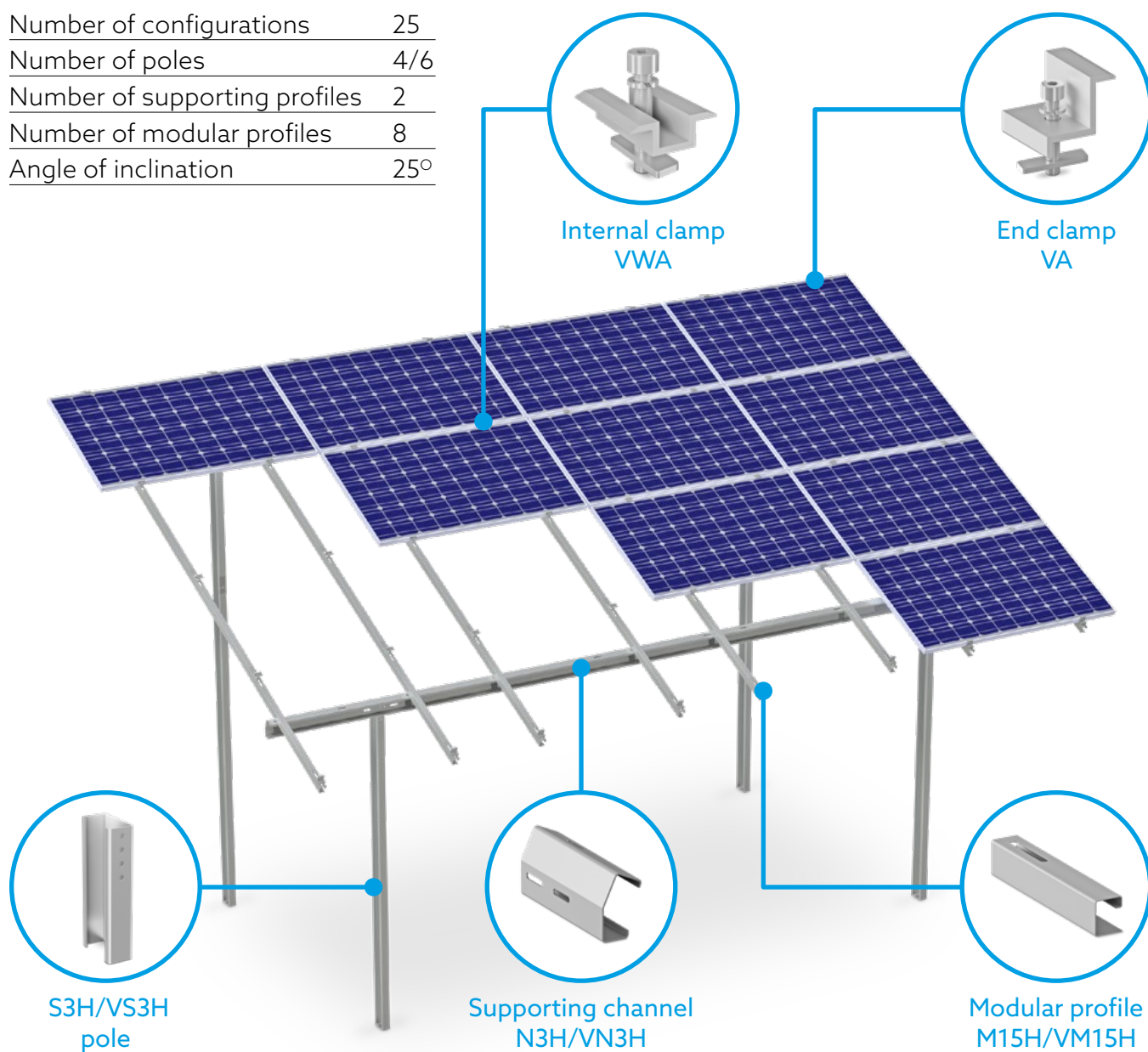
- S3H/VS3H columns
- Carrier channel N3H/VN3H
- Modular channels M15H/VM15H
- Internal and end clamps
- Screw assemblies VNZ8I8L3 and VNZ8I8L6
- Screw set VNZ812

Range of panels



Construction for 16 panels in horizontal arrangement

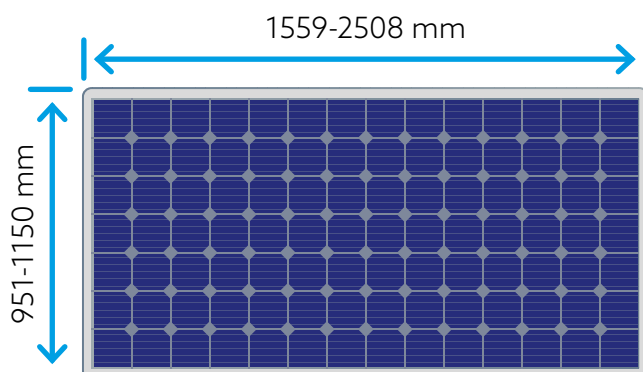
Number of configurations	25
Number of poles	4/6
Number of supporting profiles	2
Number of modular profiles	8
Angle of inclination	25°



Components

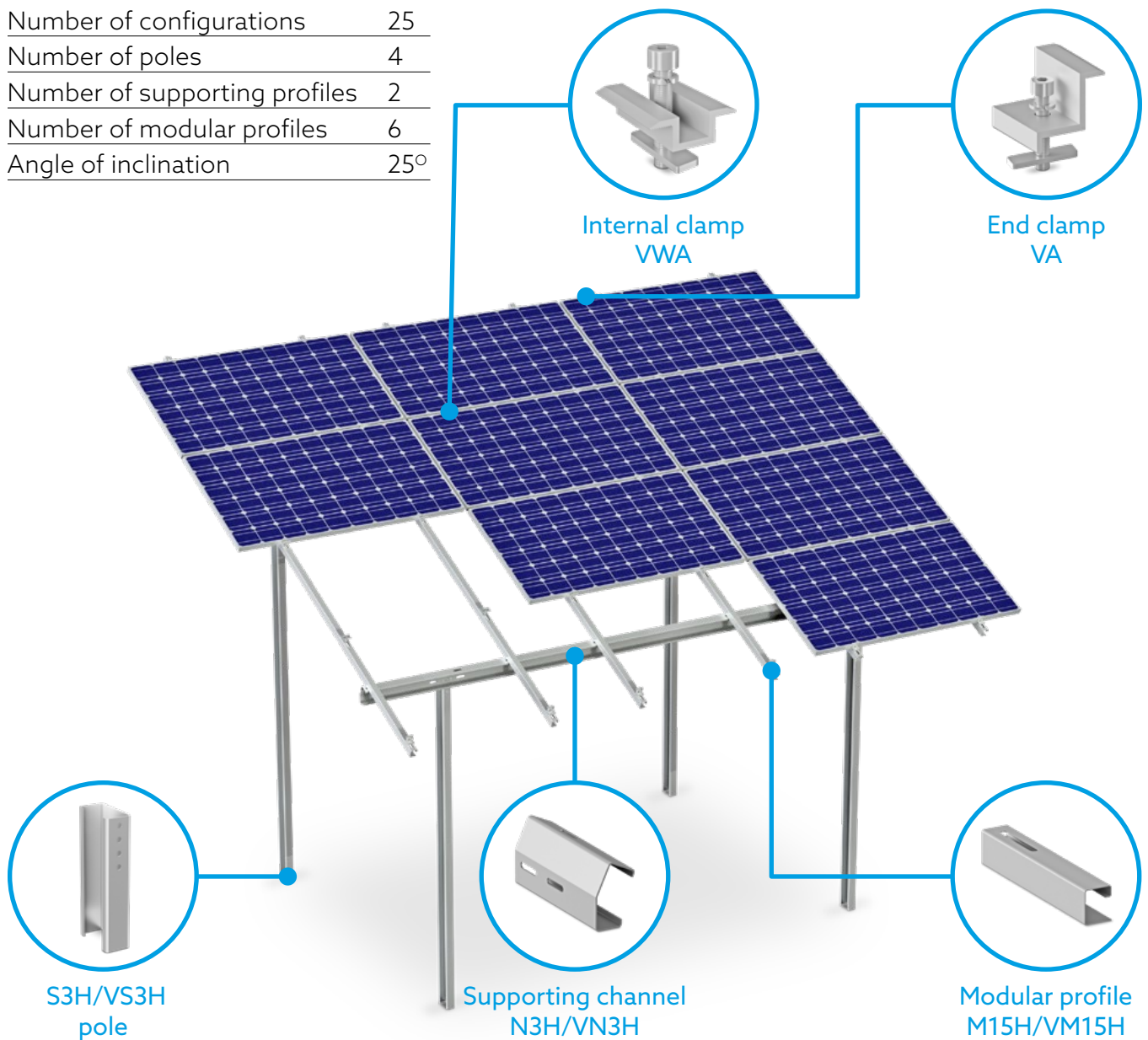
- S3H/VS3H columns
- Carrier channel N3H/VN3H
- Modular channels M15H/VM15H
- Internal and end clamps
- Screw assemblies VNZ8I8L3 and VNZ8I8L6
- Screw set VNZ812

Range of panels



Construction for 12 panels in a horizontal arrangement

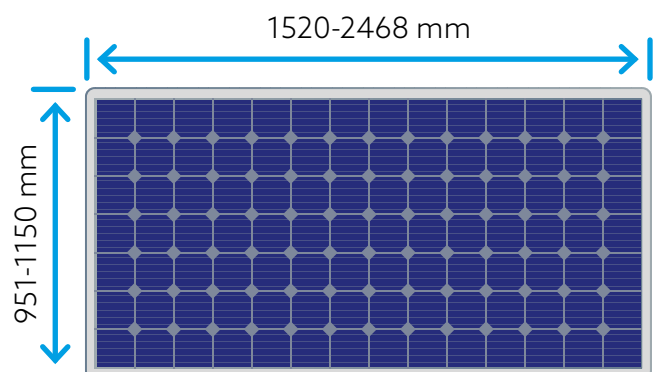
Number of configurations	25
Number of poles	4
Number of supporting profiles	2
Number of modular profiles	6
Angle of inclination	25°



Components

- S3H/VS3H columns
- Carrier channel N3H/VN3H
- Modular channels M15H/VM15H
- Internal and end clamps
- Screw assemblies VNZ8I8L3 and VNZ8I8L6
- Screw set VNZ812

Range of panels



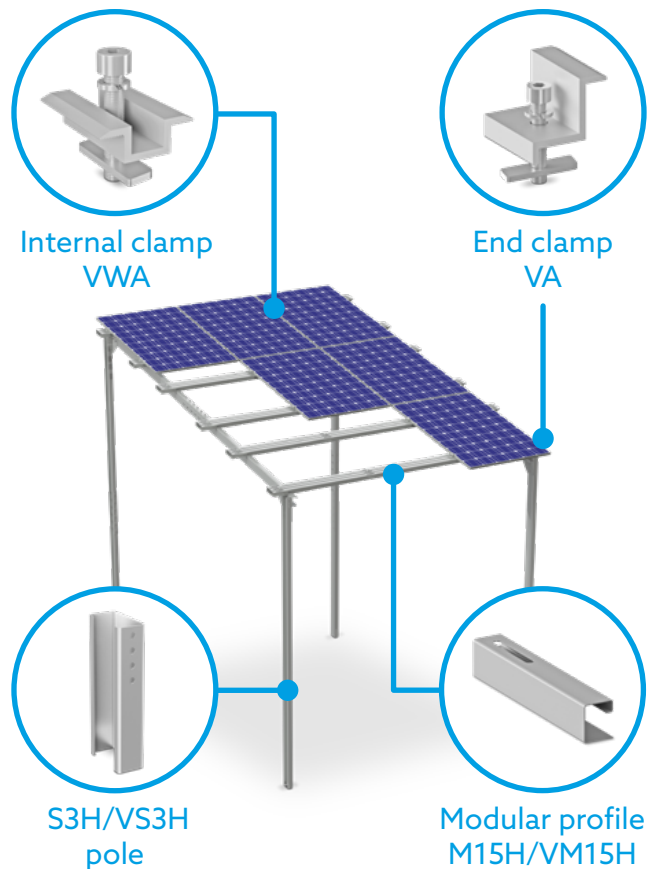
Longitudinal carport

Single-station

- Possibility to position the structure east-west
- Inclination angle 10°

Components

- S3H/VS3H columns + VLS3H connectors
- Modular channels M15H/VM15H
- Inner and end clamps
- Screw assemblies VNZ8I8L3 and VNZ8I8L6
- Screw set VNZ812

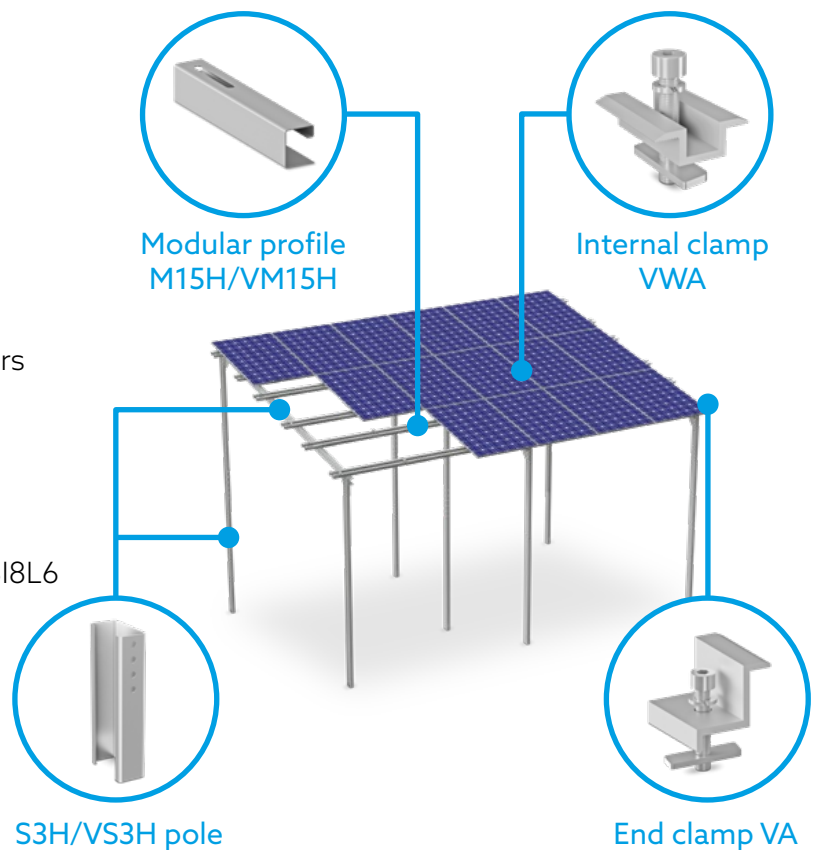


Two-station

- Possibility to position the structure east-west
- Inclination angle 20°

Components

- S3H/VS3H columns + VLS3H connectors
- Carrier channel N3H/VN3H
- Modular channels M15H/VM15H
- Internal and end clamps
- Screw assemblies VNZ8I8L3 and VNZ8I8L6
- Screw set VNZ812



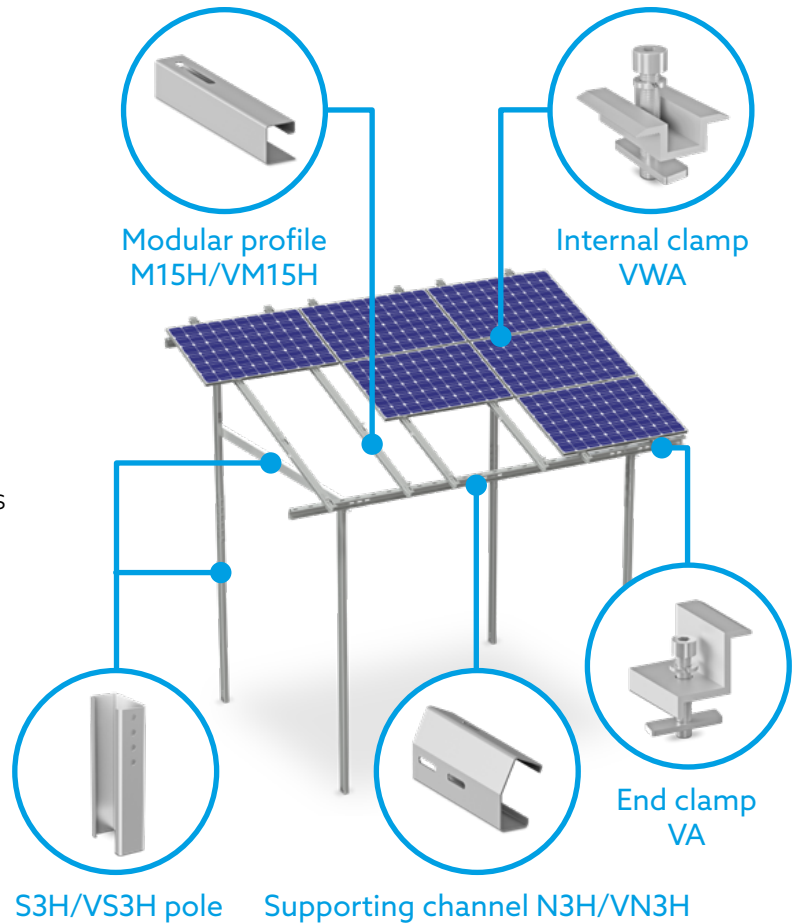
Transverse carport

Single-station

- Possibility to position the structure east-west
- Inclination angle 20°

Components

- S3H/VS3H columns + VLS3H connectors
- Carrier channel N3H/VN3H
- Modular channels M15H/VM15H
- Internal and end clamps
- Screw assemblies VNZ8I8L3 and VNZ8I8L6
- Screw set VNZ812

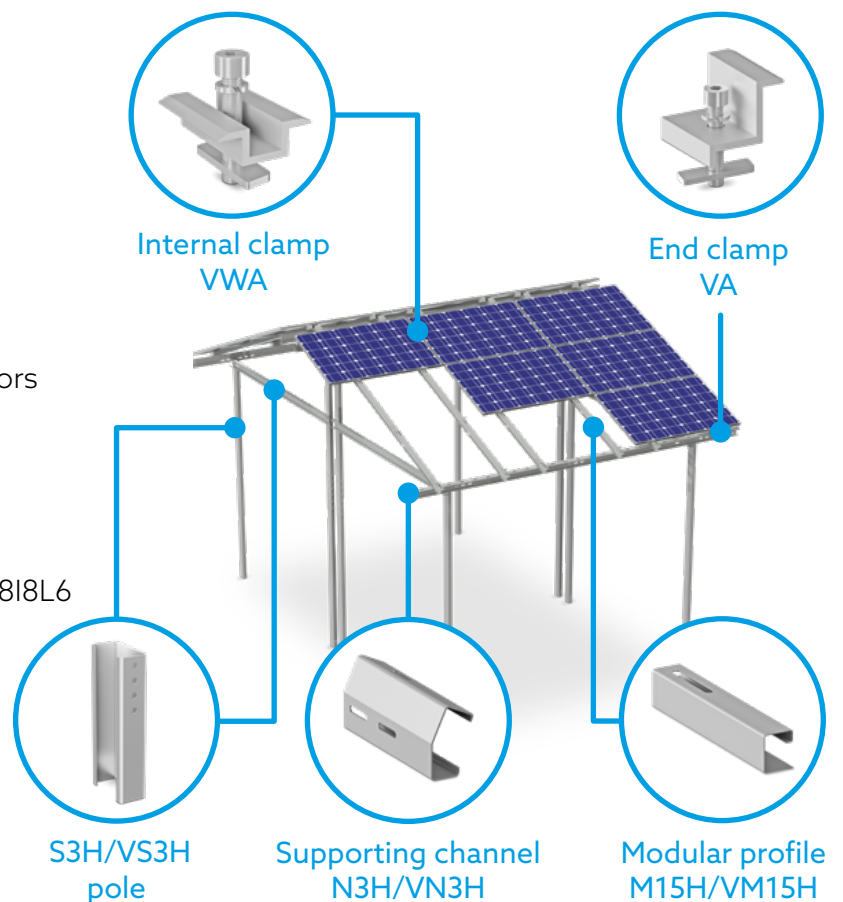


Two-station

- Possibility to position the structure east-west
- Inclination angle 10°

Components

- S3H/VS3H columns + VLS3H connectors
- Carrier channel N3H/VN3H
- Modular channels M15H/VM15H
- Internal and end clamps
- Screw assemblies VNZ8I8L3 and VNZ8I8L6
- Screw set VNZ812



Facade structure 90°

Horizontal layout

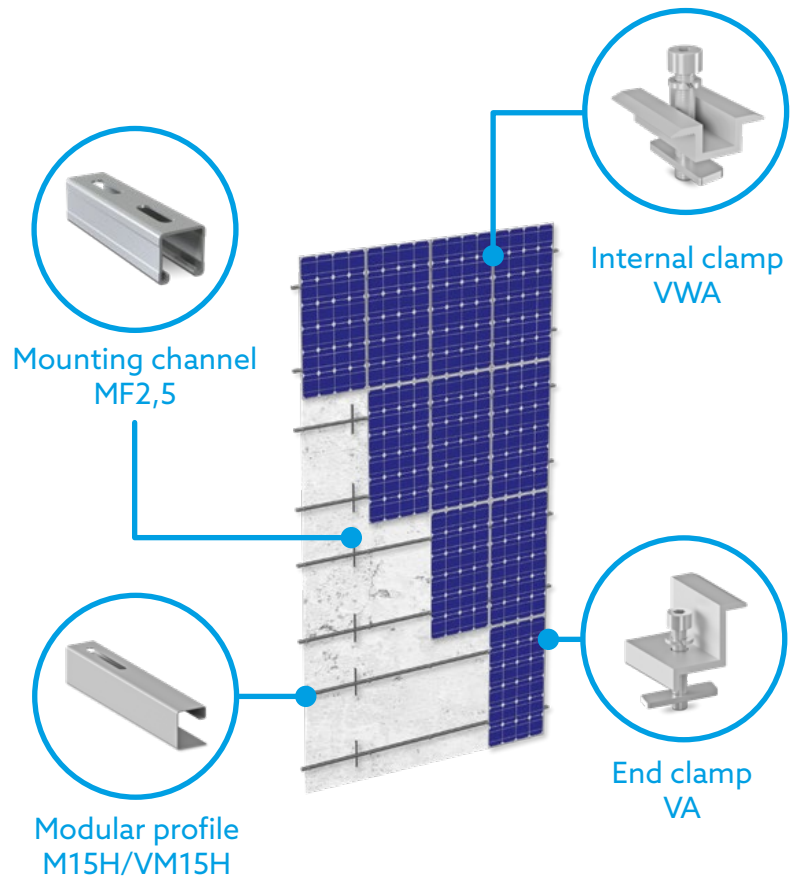
Range of panels:

Shorter side 990-1340 mm

Longer side 1670-2400 mm

Components

- Modular channels M15H/VM15H
- Mounting channel MF2,5
- Inner and end clamps
- Screw assemblies VNZ8I8L3 and VNZ8I8L6
- Sliding nut EZP
- Anchoring elements - selected depending on type and load-bearing capacity substrate



Vertical layout

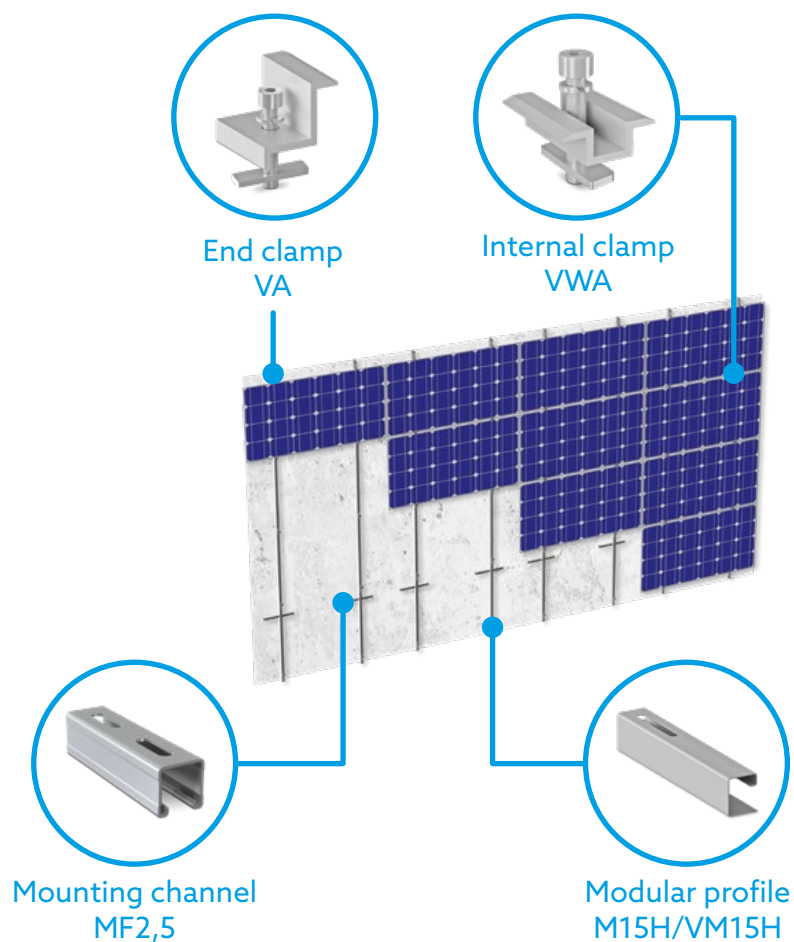
Range of panels:

Shorter side 990-1340 mm

Longer side 1670-2400 mm

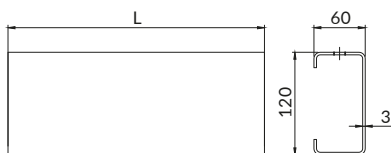
Components

- Modular channels M15H/VM15H
- Mounting channel MF2,5
- Inner and end clamps
- Screw assemblies VNZ8I8L3 and VNZ8I8L6
- Sliding nut EZP
- Anchoring elements - selected depending on type and load-bearing capacity substrate



Components of the structure.

S3H/VS3H pole



Material: S350GD steel + ZM430

Corrosion protection: Magnelis®

Compliance with standards: PN-EN 1090-1, PN-EN 1990, PN-EN 1991-1-1,3,4

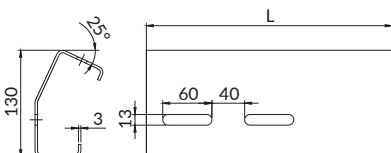


Usage:

Element of free-standing structure for photovoltaic panels.

Length L [mm]	Weight [kg]	Designation for the order	Catalogue number
2440	14,6	VS3H244	5032440038
3600	21,5	VS3H360	5043660038

N3H/VN3H supporting channel



Material: S320GD steel + ZM310

Corrosion protection: Magnelis®

Compliance with standards: PN-EN 1090-1, PN-EN 1990, PN-EN 1991-1-1,3,4

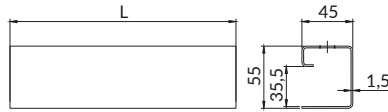


Usage:

Element of free-standing structure for photovoltaic panels.

Length L [mm]	Weight [kg]	Number of panels [pcs]	Min. length of the longer side of the panel [mm]	Max. length of the longer side of the panel [mm]	Designation for the order	Catalogue number
4600	29	12	1520	1780	VN3H46	5014600038
5300	33	12	1757	2068	N3H53/VN3H53	5015300138/5015300038
6300	40	16	1559	2468	N3H63	5016300138
8000	50	20	1584	2243	N3H80/VN3H80	5018000138/5018000038
9000	50	16	2244	2508	VN3H90	5019000038
9900	62	20/24	1634	2162	N3H99/VN3H99	5019900138/5019900038
10850	68	20/24	1766	2373	VN3H108	5011085038
11300	71	20/24/28	1597	2473	VN3H113	5011130038

M15H/VM15H modular channel



Usage:

Element of free-standing structure for photovoltaic panels.

Material: S320GD steel + ZM310

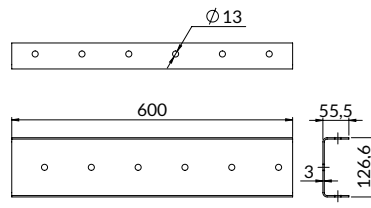
Corrosion protection: Magnelis®

Compliance with standards: PN-EN 1090-1, PN-EN 1990, PN-EN 1991-1-1,3,4



Length L [mm]	Weight [kg]	Min. length of the shorter side of the panel [mm]	Max. length of the shorter side of the panel [mm]	Designation for the order	Catalogue number
4140	7,91	950	990	M15H41/VM15H41	5024141158/5024140158
4340	8,29	990	1035	M15H43/VM15H43	5024341158/5024340158
4540	8,67	1035	1079	M15H45/VM15H45	5024541158/5024540158
4740	9,05	1079	1123	M15H47/VM15H47	5024741158/5024740158
4840	9,24	1123	1156	M15H48/VM15H48	5024840158

VLS3H pole connector



Usage:

Designed to connect VS3H profiles.

Material: S355J2 steel

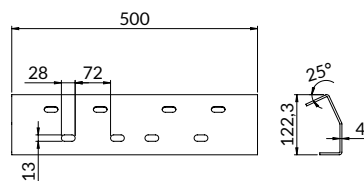
Corrosion protection: hot-dip galvanised

Compliance with standards: PN-EN 1090-1, PN-EN 1990, PN-EN 1991-1-1,3,4



For channels	Weight [kg]	Designation for the order	Catalogue number
VS3H	3,1	VLS3H	50000031756

Support profile connector VLN4H



Usage:

Designed for connecting VN3H profiles.

Material: S355J2 steel

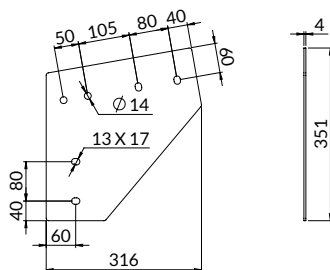
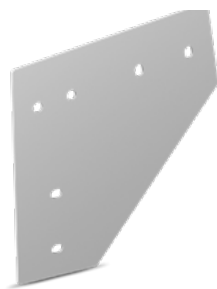
Corrosion protection: hot-dip galvanised




Compliance with standards: PN-EN 1090-1, PN-EN 1990, PN-EN 1991-1-1,3,4



For channels	Weight [kg]	Designation for the order	Catalogue number
VN3H	3,2	VLN4H	51143000408

Front carport mounting triangle VTRCP



-  Material: S355J2 steel+N
-  Corrosion protection: hot-dip galvanised
-  Compliance with standards: PN-EN 1090-1, PN-EN 1990, PN-EN 1991-1-1,3,4

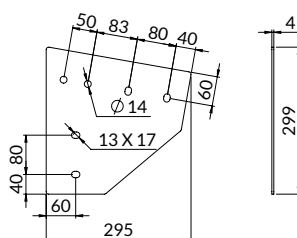
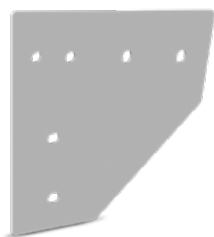





Usage:

Front connector between mullion and support profile in PV structures.

Quantity [pcs./package]	Designation for the order	Catalogue number
3	VTRCP	50913500041

Rear carport mounting triangle VTRCT



-  Material: S355J2 steel+N
-  Corrosion protection: hot-dip galvanised
-  Compliance with standards: PN-EN 1090-1, PN-EN 1990, PN-EN 1991-1-1,3,4

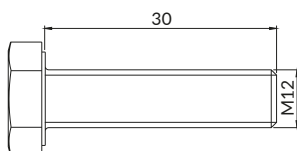



Usage:

Rear connector between mullion and support profile in PV structures.

Quantity [pcs./package]	Designation for the order	Catalogue number
3	VTRCT	5093000041

Hexagon head screw VN8S



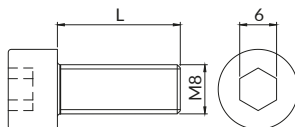
-  Material: stainless steel
VN8S12X30 - A2-80

Usage:

Hexagon-head screws for mounting the structure.

Quantity [pcs./package]	Moment dokręcenia [Nm]	Designation for the order	Catalogue number
30	76	VN8S12X30	5091230802

Allen head screw VN8I



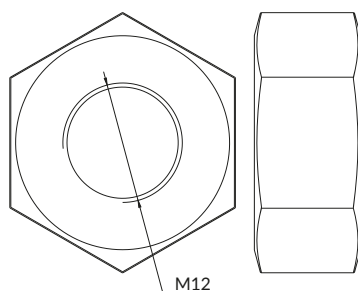
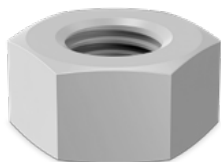
Material: stainless steel
VN8I8 - A2-80

Usage:

Allen screws for mounting the panels.

Length L [mm]	Quantity [pcs./package]	Designation for the order	Catalogue number
25	10	VN8I8X25	5070825802
45	10	VN8I8X45	5070845802

Hexagon nut VN8N



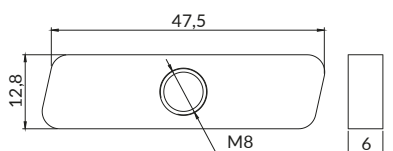
Material: stainless steel
VN8N12 - A2-80

Usage:

Hexagonal nuts for mounting the structure.

Quantity [pcs./package]	Designation for the order	Catalogue number
30	VN8N12	5101200802

Slanted nut VNNS



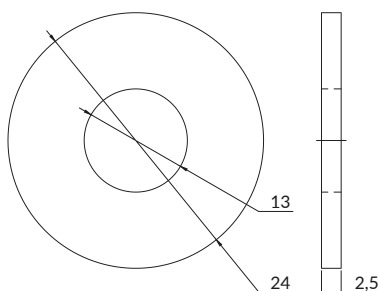
Material: stainless steel

Usage:

Bevel nuts for structural assembly.

Quantity [pcs./package]	Designation for the order	Catalogue number
10	VNNS8	5080842022

Round washer VNPD



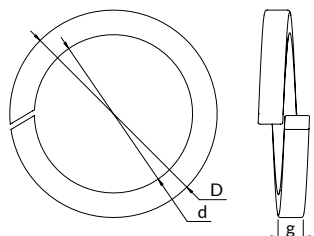
Usage:

Shims for assembling the structure with the G.1 VNZ screw set.

Material: stainless steel

Quantity [pcs./package]	Designation for the order	Catalogue number
60	VNPD12	50001231277

Spring washer VNPDS



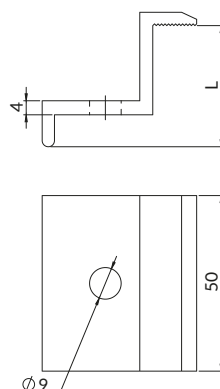
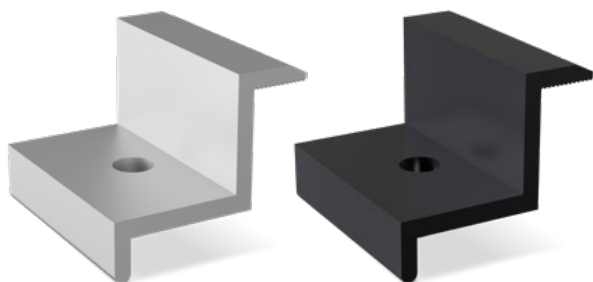
Usage:

Spring washers for assembling the structure with the G.1 VNZ screw set.

Material: stainless steel

Outer diameter D [mm]	Inner diameter d [mm]	Material thickness G [mm]	Quantity [pcs./package]	Designation for the order	Catalogue number
21,1	12,2	2,5	30	VNPDS12	5111200022
14,8	8,1	2	100	VNPDS8	5110800022

VA/VC end clamps



Available in natural
VA aluminium or VC black.

Material: aluminium

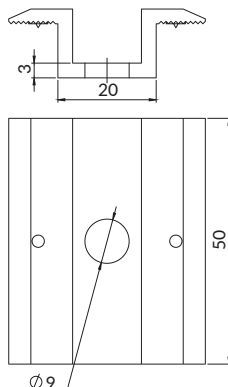
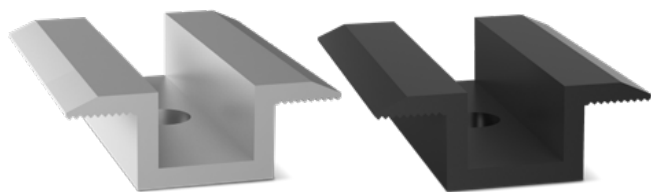
Corrosion protection: anodising

Usage:

Clamps for mounting photovoltaic panels.

Height L [mm]	Designation for the order	Catalogue number
30	VA30	5063050106
30	VC30	5063050016
35	VA35	5063550106
35	VC35	5063550016
40	VA40	5064050106
40	VC40	5064050016

VWA/VWC inner clamps



Available in natural
VWA aluminium or VWC black.

Material: aluminium

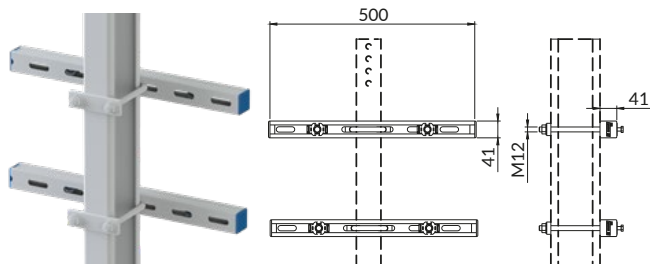
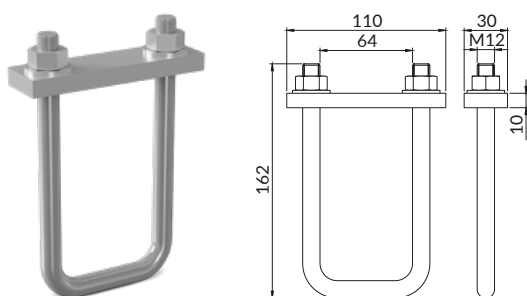
Corrosion protection: anodising

Usage:

Clamps for mounting
photovoltaic panels.

Height [mm]	Designation for the order	Catalogue number
15	VWA5	5051450106
15	VWC5	5051450016

Inverter mounting VKLF and VKLF KPL



Material: S355 steel/stainless steel

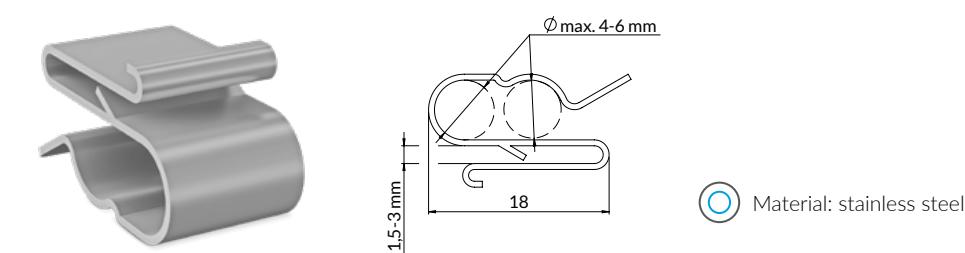
Material: S355 steel/stainless steel

Usage:

The VKLF6 inverter mount is adapted to the VS3H pole. The VKLF6 KPL is additionally equipped with the innovative N-EZP-M8 sliding nut. This allows the full range of adjustment of the inverter mounting to the XP-SZ-MF2.5 profile.

Designation for the order	Catalogue number
VKLF6	5091212022
VKLF6 KPL	5091222022

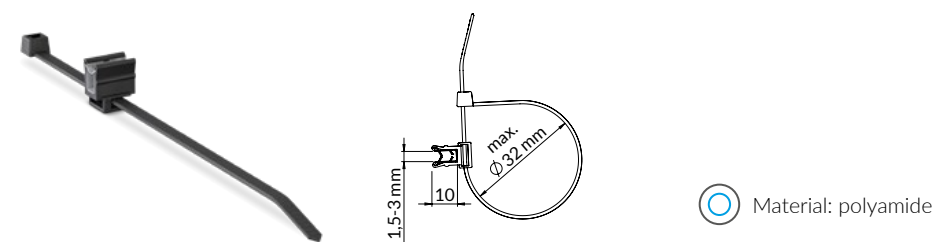
Accessories for suspension of VNK cabling



Usage:
 Used in photovoltaic installations to hold and secure the electrical cables that connect the solar panels, inverter and other components of the photovoltaic system. Cable clips keep the voltage of the cables constant and prevent the cables from wrapping loosely due to wind or other external factors. They facilitate access to cables and photovoltaic components during maintenance, repair and inspection of the photovoltaic system.

Durability [kN]	Weight [kg]	Quantity [pcs./package]	Designation for the order	Catalogue number
1,4 / m²	0,002kg	100	VNK	51670000000

Accessories for suspension of VO cabling



Usage:
 They allow photovoltaic cables to be routed aesthetically and safely. Protection is particularly important in areas where the photovoltaic installation may be exposed to external factors such as wind rain or snowfall. help to maintain adequate spacing between the cables, which can help to minimise electromagnetic interference (EMI) and prevent interference to the photovoltaic system.

Diameter d [mm]	Length L [mm]	Durability [kN]	Weight [kg]	Quantity [pcs./package]	Designation for the order	Catalogue number
32	150	0,135	0,002	100	VO	51670050000

We are **ECO.**

Environmental protection is an important part of the company's policy. We implement a number of ecological projects and carry out activities with regard to reducing the consumption of energy, maintaining the machinery stock in perfect condition and strictly supervising the processes that take place with the use of chemical substances.



Waste management

We plan, design and implement measures to reduce waste and its negative impact on the environment. Our waste management is very efficient — we minimize waste generation “at the source”. All the waste we produce is transferred to specialized units for use in secondary production or disposal. We recycle 97% of the waste we generate.



Secondary raw materials

A significant portion of the waste generated in the company's operations is used as secondary raw materials obtained from post-production and post-consumer waste. Scrap metal, waste paper, plastic waste and used oils are the plant's main secondary raw materials.



Green supplier

The principles of environmental responsibility that guide us also apply to cooperation with our suppliers. Our business partners' approach to environmental issues in accordance with ecological standards is very important to us.



Prints

We are reducing the amount of printing, to this end we are switching to online archiving and document workflow. We are equipping workstations with dual monitors, making it easier to compare documents without printing them.



Selection of clean materials

We make every effort to use environmentally friendly raw materials and supplies. We print only on unbleached paper, which is manufactured with limited use of toxic and environmentally harmful bleach.



Eco-friendly packaging

We feel responsible for our environment, which is why we pay special attention to economical printing, using eco-friendly paper for printing, envelopes and recyclable packaging manufactured in an environmentally friendly manner. We significantly reduce the use of paper by implementing an electronic document workflow system.

We have been recognized by:







THALE sp. z o.o. sp. k.

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