



Products and Brands 2022

global solar distribution



TURNING CONVICTION INTO ACTION



„Entrepreneur-driven companies are 'different' – and Krannich Solar is a typical entrepreneur-driven company. We see our business as far more than just a job. We want our operations to have meaning, and our actions are based on our belief in our vision of '100% renewable energies'. Over 25 years in the photovoltaic industry means over 25 years of operation in volatile markets that are strongly impacted by political conditions. Having securely carved out our current position, we view the years to come with confident optimism. Our international strategy is the guarantee of our success and will continue to determine our course.“

Kurt Krannich

Expertise? Future-facing!

Originally a two-man operation, Krannich today is a successful international company. Owner-run, friendly, reliable. Personal responsibility and individual reliability are our outstanding strengths and the keys to our success.

Kurt Krannich was always convinced by the idea of using solar power to generate electricity. A practical thinker and theoretical researcher rolled into one. The trading company thus rose to become one of the leading names on the global photovoltaic market. Today Krannich focuses its operations on the distribution of all components that make up a PV system. Our primary features are our roster of longstanding partners, our smart technology, our state-of-the-art systems – and our dynamic people.

100% dedication for 100% renewable energy

Solar power is already one of our foremost sources of energy. Our conviction is also the force that drives us. Our mission is clear. Wherever our customers' needs and requirements are concerned, speed is of the essence. Fortunately, we have plenty of features that cater to this: our broad product portfolio, high availability and naturally extreme flexibility as a given.

Experts with in-depth market familiarity and experience, with specialist knowledge and a flair for identifying trends. And our customers? They are installers and planners of PV systems of all sizes, supported by us through every project phase with our top-quality products, expertise and service. As a specialist wholesaler of photovoltaic supplies and systems, we are industry insiders, service providers, optimisation experts, consultants, and hands-on action-takers. But first and foremost, we are expert partners.

GLOBAL? ABSOLUTELY NORMAL!

Our roots are in Germany, but our success as a photovoltaics specialist extends across all continents. How do we do it? With passion! Our company's founder and our employees have one thing in common: a passion for solar power.

IN STOCK? AND ALWAYS ON THE WAY!

A full-scale logistics centre with 5,500 different products in stock? Of course we're proud! But best of all is that the products don't stay on the shelves for long; they're always on the way to our customers. We don't agree that "the journey is the reward." Logistics operations demonstrate their quality when products are delivered to the customer on schedule. And it works! But shipping is actually only the last stage; the first link in a seamless supply chain is always a sophisticated plan, keeping the big picture in view from scheduling to goods out.

Maximum availability, minimum delivery time

Qualified staff make it all happen. With carefully selected logistics partners to boost the pace. And all this to ensure our products arrive promptly where they are needed: at the customer, straight to the construction site, at a prearranged time, or by next-day delivery. We always welcome personal calls – but we know they won't be needed to chase up an order.



LOOKING FOR A PARTNER? FOUND AN EXPERT!

As experts, we are happy to accept all projects and also operate internationally. We offer a full portfolio of components and plenty of experience for rooftop or free-standing photovoltaic systems. High volumes? Fast delivery! We are naturally able to supply large volumes even at short notice and support your project with our expertise.

We fulfil all needs and wishes. Always to the highest standard! We can meet virtually all your needs – in plain speech and even foreign languages.

Ambitious plans? No risk!

Projects on a grander scale need not mean tightening your belt. In large-scale projects, preserving liquidity while maximising flexibility and functional efficiency is particularly vital. We take care of this aspect, with clear terms governing flows of payment and goods. No need for our customers to buy and pay for goods long before the project launch. That's fair play – the Krannich way!



SERVICE? WITH HEART AND SOUL!

Of course we're wholesalers – but service is our specialty! After all, our expertise is the focus, and our service makes all the difference. So where can that service be found? In our DNA, in our blood, and – first and foremost – in each and every member of our company. In tandem with our product catalogue and our stellar delivery capability, our service is the premier benefit for our customers. They experience it first when they contact their personal sales department representative, and on many other occasions afterwards. So don't delay – contact us today!

CUSTOMER SEMINARS AND WEBINARS

**Always up to date
Always out ahead.**

Specialist expertise is particularly valuable when it is up to date – in fact, only then. Our seminars and webinars keep our customers up to date with the state of the art at all times. Events on a range of topics, some with external partners, always practice-based, and always offering the opportunity for personal questions and exchanges of ideas. New technologies, innovative products, laws and obligations, and in-depth basic knowledge – our seminars and webinars ensure our customers are always one step ahead.

TECHNICAL SUPPORT

**Questions?
Ask away.**

Some might say "nerds"; we prefer to say "tech fans." That's why the trickier the tech question, the more we love it. And with our extensive portfolio covering every aspect of photovoltaic systems, we deliver a whole solution – not just an answer. Enquiries are processed smoothly in our ticket or call system.

AFTER-SALES & SERVICES

**As good afterwards
as it was before.**

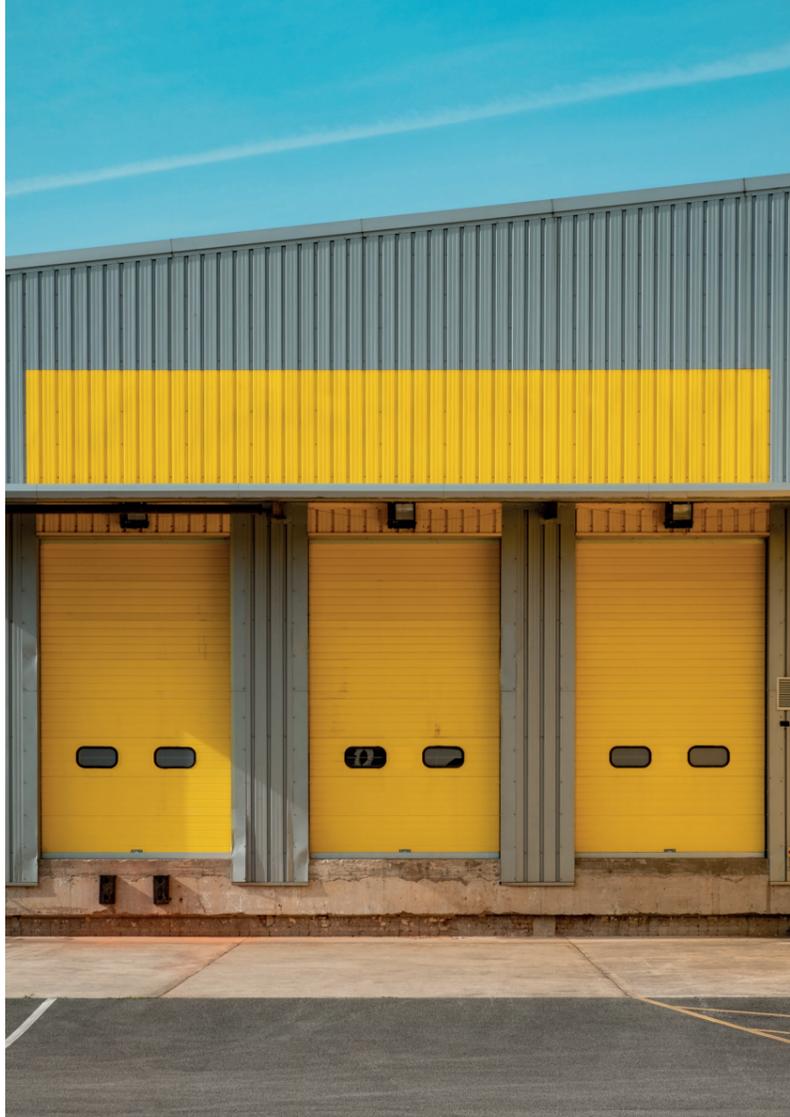
It's not unknown for something to go wrong – but when that happens, it's vital to come up with a good solution fast. And that's exactly what we do. Promise! Service doesn't stop when a sale is clinched. As the name implies, After Sales Service involves anything from fast processing of complaints to measurement of a photovoltaic system or replacement of a defective product. Our main priority is to keep the project on track, and our customers' nerves calm.



ONLINE SHOP

24/7? In our webshop!

The full range of our products, available around the clock and backed up with in-depth information. It's all there in our webshop. Making shopping easier and more convenient with extra features such as delivery date options and multiple cart management. But what about the prices? Always up to date, and almost always with attractive special offers.



VERSATILE? UNIQUE!

Think about photovoltaics, and you usually think of a roof covered with solar panels. These products are still central to our product portfolio. But there's more. We have always supplied the full range of products for realising PV projects. For private households, commercial enterprises or even solar parks, as individual sections or all-in-one solutions. And our services involve far more than simply shipping products. They enable our customers to rely on outstanding availability and prompt provision.



MORE TRUST. WITH EVERY CHECK.

High-quality products, superb quality, compatible components – these are the requirements for inclusion in our portfolio. This is what our customers can rely on, even if we don't always rely wholly on the manufacturer's information. Our philosophy is that it's better to check, with our own eyes, applying our own quality criteria. A task that's performed locally by our global purchasing representatives, and enables us to assure that our products offer tested quality.

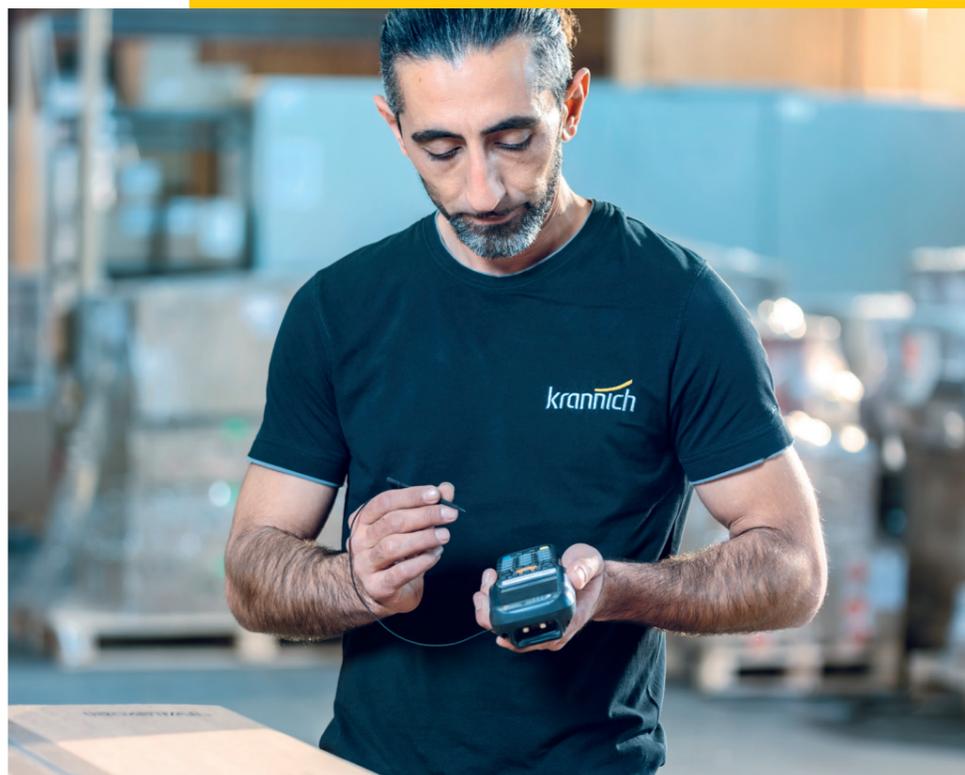
NOT ALWAYS THE SAME, BUT ALWAYS THE BEST.

Top-quality products are a matter of course. Plus professional consulting for customers and project partners on top. These are the foremost criteria for high-quality, efficient, and cost-effective photovoltaic systems. And this is exactly what we describe as responsible action.

QUALITY? OUR WATCHWORD!

Let's be clear: we have a weakness for strong brands. When products truly win us over, we add them to our catalogue – and only then. Nothing but the best products for our customers. They can then be certain that our services always have the ideal solution.

Sound good? It gets better! The market is crammed with manufacturers making really outstanding products. And we have plenty of them. So many, in fact, that we can boast of the broadest range on the market, taking in all components for photovoltaic systems.





AXITEC



Short Facts

- + German guarantor
- + Excellent quality

Modules

- + High-yield, high-efficiency modules
- + 15 years manufacturer warranty

For years AXITEC has been one of the most established global brands of solar modules and energy storages. The engineering at the headquarters in Germany supports the global production capacities of 1 GWp. The core competence comprises the complete process chain for solar modules and energy storages from development and manufacturing through quality assurance to sales and service.



BYD Company Ltd. is a Chinese high-tech company specializing in IT, automobiles and renewable energy. Founded in 1995, BYD is the world's largest manufacturer of rechargeable batteries and the technology leader in lithium batteries. BYD Battery-Box cells are used in highly efficient electric vehicles as well as in stationary applications. Many years of experience and the largest production capacity worldwide make BYD's high and low voltage battery storage systems an attractive solutions in terms of quality and price.



Short Facts

- + One of the world's largest manufacturers of rechargeable batteries
- + Cobalt-free lithium-iron-phosphate (LFP) battery: maximum safety, lifetime and performance
- + Patented wireless plug-in system for battery modules simplifies transport and enables fast installation
- + Scalable capacity thanks to modular design
- + Compatible with inverters from Fronius, GoodWe, Kaco, Kostal, SMA, SolarEdge, Sungrow



Chemitek

LIQUID TECHNOLOGY



Chemitek is a Portuguese company dedicated to the development, production, and trading of efficient, easy to apply, innovative and environmentally friendly chemical products for industrial maintenance.

The company presents a range of solutions within three main categories: Solar, Industrial and Health and Hygiene.

Chemitek's products for the solar industry have been developed having in mind the different problems and conditions of each plant, to find the best solution for your solar asset.

It is Chemitek's vision to become the most innovative and sustainable chemical company worldwide by committing to develop highly efficient and environmentally friendly products.

Short Facts

- + Development and research in own laboratory
- + Inhouse quality control made under the ISO 9001:2015
- + Products certified by 3rd parties such as the international laboratories TÜV Sud and CVR



Short Facts

- + Austrian quality product
- + Diverse product portfolio of inverters and intelligent charging solutions for e-cars up to 22 kW
- + Comprehensive monitoring and communication functions
- + Unique service through board and power component exchange
- + Facilitation of inverter assembly, installation and maintenance through innovative „SnapIN“ function
- + Comprehensive, worldwide service with technical support



Fronius International GmbH, based in Wels, Austria, has developed from a family business into a global player in the 75 years since it was founded. The company has been involved in the development and production of inverters since 1992. The name Fronius stands for quality, intensive research work and constant search for new, innovative solutions.





GOODWE



GoodWe has become one of the world's leading manufacturers of PV inverters and energy storage solutions since its founding in 2010. With a cumulative installed capacity of 23 GW, the Chinese company's inverters are used in more than 100 countries worldwide and range from 0.7 kW to 250 kW.

Short Facts

- + Comprehensive portfolio of products and solutions for residential and commercial PV systems
- + Single and three-phase PV, hybrid and storage inverters
- + Technological innovation as the most important core competence
- + In-house R&D centers ensure performance and quality
- + GoodWe+ Partner Program
- + Unparalleled levels of customer service



HUAWEI

Headquartered in Shenzhen, China, Huawei was founded in 1987 and is one of the world's largest telecommunications companies. Huawei provides leading intelligent PV solutions with more than 30 years of experience in digital information technology. Huawei aims to build efficient smart operation and maintenance systems and install safe, reliable, and grid-supporting smart PV systems.



Short Facts

- + Flexible, versatile and powerful product portfolio from residential to commercial
- + Single and three-phase inverter and battery storage system
- + The only manufacturer to offer DC-side fault detection technology as a standard feature
- + One-man installation possible due to low weight
- + Modular battery design
- + Flexible planning
- + Expandable up to 30 kWh





New: Dome 6.0 System



As a mounting system manufacturer for solar technology, K2 Systems has been developing innovative system solutions for the international photovoltaic industry at its German headquarters since 2004. The proven support systems for use on pitched and flat roofs or for special projects are particularly convincing due to their high quality and functionality. The many years of experience and the service-oriented way of acting as well as the personal contact make K2 Systems a sympathetic and reliable partner.

Tile roof

SingleRail

- + Fast and inexpensive with direct lateral connection to the rail without additional components including individual height adjustment
- + Secure snap-in mounting – without bolting to the base plate

SolidRail

- + Extensive range of mounting rails, for a wide variety of load cases
- + High flexibility for many different spans

Insertion system

- + Fast installation of modules without screws, module clamps and assistance
- + Sleek design with continuous closed surface

Trapezoidal sheet metal

SpeedRail

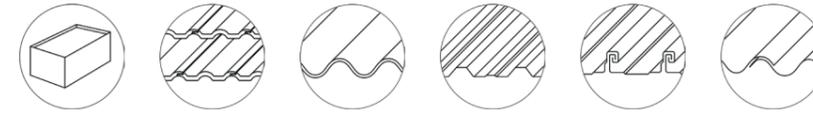
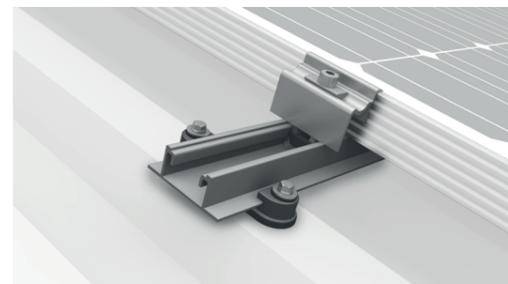
- + All-rounder with only 4 installation steps - also suitable for high loads
- + Floating and with controlled thermal linear expansion

MiniRail

- + Short rail system with universal module alignment
- + Optimized for storage and transport thanks to fewer components

MultiRail

- + Roof connection and mounting rail in one component
- + Available as short rail or flexible component in different lengths



Metal seam roof

SingleRail & SolidRail

- + Penetration-free by means of different seam clamps for standing and round seams

Corrugated sheet metal

MultiRail CSM

- + MultiRail CSM is roof connection and mounting rail in one component for corrugated sheet radii of 22-45 mm

Corrugated fiber cement

- + Hanger bolts or solar fasteners with SingleRail, SolidRail or insertion system

Flat roof

Dome 6.10

- + Pre-assembled for time-saving installation or as an unassembled long rail system for cost efficiency
- + Single and double sided 10° elevated available

New: Dome 6.0

- + Roof-parallel mounting system for flat roofs with Dome 6 components

Free planning software K2 Base

- + Easy planning of the mounting system in 5 steps
- + Automatic calculation of snow and wind loads at the project site
- + Detailed project reports incl. structural analysis report, assembly and ballasting plan as well as article list
- + Interface to common inverter manufacturers without multiple entry of project data
- + One user account covers all digital services: K2 CheckApp in the quotation phase, K2 Base in the planning phase and K2 DocuApp in the documentation phase





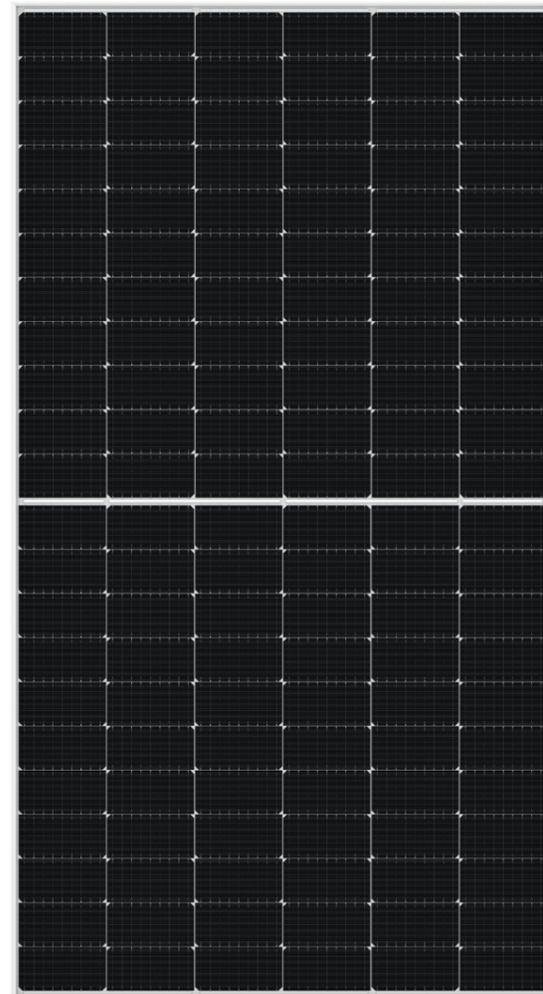
LONGI



Since its foundation in 2000, the Chinese company has developed into the most important manufacturer of monocrystalline solar modules and has been the global market leader since 2020. With an integrated, vertical value chain from silicon ingot to wafers and cells to modules and a focus on research & development that is unique in the PV manufacturing industry, it is able to guarantee particularly competitive cost structures and the highest quality standards. LONGi is the leading solar module and silicon wafer producer and also supplies well-known market participants.

Short Facts

- + Largest manufacturer worldwide with 50 GW+ module capacity (2020)
- + Continuous, in-house and quality-optimized ingot / wafer / cell and module production
- + Pure „mono“ manufacturer since inception in 2000 – unique in the PV manufacturing industry
- + LONGi invests 5-7% of annual sales in research & development. Over 1 billion USD in total – the highest R&D spending in the entire PV manufacturing industry
- + Excellent reliability over the entire product life cycle
- + Highest yield in TÜV Rheinland's „All Quality Matters“ and PV Magazine yield tests
- + High Achiever / Top Performer in PVEL Reliability Score Card and RETC Module Index
- + Only AAA rated pure PV manufacturer
- + BNEF 100% bankable
- + Trend-setter in wafer formats such as M6 and M10



As a leading global specialist in photovoltaic and storage technology, SMA creates the conditions for a decentralized and renewable energy supply. SMA's portfolio includes efficient solar and battery inverters, energy solutions for PV systems and storage systems of all performance classes, intelligent energy management systems and charging solutions for electric vehicles. Worldwide, SMA inverters are installed in over 190 countries with a total capacity of 100 GW. SMA's award-winning technology is protected by around 1,600 patents and registered utility models.



Short Facts

- + 40 years of leading-edge technology for the energy transition
- + Comprehensive product portfolio of single and three-phase string inverters, battery inverters and charging solutions
- + Fast and easy installation
- + Innovative monitoring and online supervision concepts
- + EV charger with up to 22 kW, eligible for KfW subsidies
- + Benchmark in experience, quality and technology
- + Worldwide service
- + New: SMA hybrid inverter Sunny Tripower Smart Energy



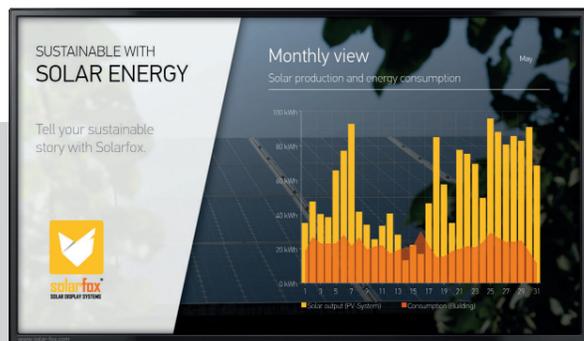
solarfox® SOLAR DISPLAY SYSTEMS

Visualise solar power and tell your sustainable story to the public with Solarfox® displays.

A PV system on a roof is often flat and invisible to visitors. But who can know about it? The investments in sustainability are often not used for marketing and image!

A Solarfox® display at the entrance solves this problem ideally and helps you to express your commitment in an impressive way. Your perfect image ambassador!

Solar displays from Solarfox® not only visualise renewable energies and CO2 avoidance, but are also an "innovative bulletin board" for all kinds of content, that offer a wide variety of built in tools to integrate your information.



Short Facts

- + Compatibility with almost every system
- + Individual customisation
- + Locational independence
- + Visualisation of multiple PV Systems
- + Easy and flexible data communication via the Cloud



Tigo®

Tigo is the global leader in Flex MLPE (Module Level Power Electronics) with innovative solutions that significantly improve safety, increase energy production and reduce operating costs of solar installations. Tigo's TS4 platform maximizes the benefits of PV installations and provides customers with the most scalable, versatile and reliable MLPE solution on the market. Tigo was founded in Silicon Valley in 2007 to accelerate the adoption of solar energy worldwide. Tigo systems are in operation on every continent, producing gigawatt-hours of reliable, clean, affordable and safe solar energy every day. Tigo's global team is dedicated to developing the world's best MLPE so more people can enjoy the benefits of solar energy.

Short Facts

- + Increase of energy yields
- + Flexible to use for optimization, monitoring and fast shutdown
- + Works with major modules and inverters
- + Has the lowest failure rates in the industry
- + Water and corrosion resistant
- + No ground wire required



VICTRON ENERGY
www.victronenergy.com

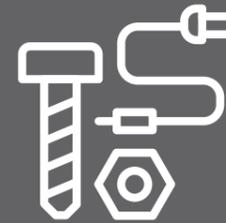


Victron Energy is a Dutch company specialized in the design and manufacture of products for battery-based energy systems. Victron products, which excel at efficiently combining two or more distinct power sources, are recognised internationally as the professional choice for resilient energy storage systems. Victron products include sinewave inverters, sinewave inverterschargers, battery chargers, DC/DC converters, transfer switches, remote monitoring and more.



Short Facts

- + Large scalable solutions
- + Proven technology for over 47 Years
- + Great support system world wide



ACCESSORIES

Cables



Connectors



Tools

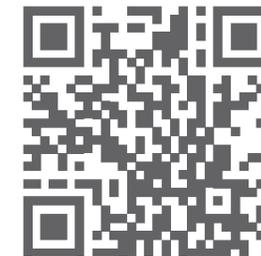


Others



Interfaces & connection boxes + PID solution +
PV Thermie + Power supply accessories + Other accessories

Further information on our website!



OVERVIEW

MOUNTING SYSTEMS



RESIDENTIAL
COMMERCIAL
INDUSTRY



Tiled roof

<p>Mounting systems</p>	 <p>SingleRail, SolidRail, Insertion System</p>		
<p>System structure / Rail concept</p>	<p>roof parallel / single or double layer</p>		<p>roof parallel / Insertion System (always double layer)</p>
<p>Rail type</p>	<p>SingleRail</p>	<p>SolidRail</p>	<p>SolidRail + InsertionRail</p>
<p>Rail length (m)</p>	<p>2,25 3,30 4,40 5,50</p>		
<p>Roof fixing</p>	<p>roof hook with wood screws</p>		
<p>Fixing points</p>	<p>rafters</p>		
<p>Module clamps</p>	<p>for 30 - 50 mm frame height in black or silver</p>		<p>InsertionRail black or silver, for 35 and 40 mm frame height</p>
<p>Notes</p>	<p>flexible in use</p>		<p>note usable module frame heights</p>



Trapezoidal roof (no isolated trapezoidal roof)

Mounting systems	SpeedRail	MultiRail, MiniRail		MiniFive (based on MiniRail)
System structure / Rail concept	roof parallel / single or double layered	roof parallel / short rail system		5° elevation / short rail system
Rail type	SpeedRail 22	MultiRail	MiniRail	MiniRail
Rail length (m)	2,25 3,30 4,40 5,50	0,10	0,25	0,40
Roof fixing	with speed clip and thread-forming drilling screw	thread-forming drilling screw		thread-forming drilling screw
Fixing points	metal roofing	metal roofing		metal roofing
Module clamps	for 30 - 50 mm frame height in black or silver			MiniClamp for 30 - 50 mm frame height in black or silver
Notes	because of the strength of the drilling screw in the K2-BASE planning, pay attention to the material and thickness of the metal sheet			



Trapezoidal roof (no isolated trapezoidal roof)

Mounting systems	 Solar fastener with calotte and SingleRail, SolidRail, Insertion System		 Dome Classic on trapezoid
System structure / Rail concept	roof parallel / single or double layer with continuous rails		10° flat roof system with roof fixing
Rail type	SingleRail	SolidRail	SpeedRail 22
Rail length (m)	2,25 3,30 4,40 5,50		2,10 2,25 3,30 4,40 5,50
Roof fixing	solar fastener with calotte (wood / steel)		with speed clip and thread-forming drilling screw
Fixing points	roof substructure		metal roofing
Module clamps	for 30 - 50 mm frame height in black or silver		for 30 - 50 mm frame height in black or silver
Notes	ensure sufficient beam/material thickness of the roof substructure		cannot be completely planned in K2-BASE (contact Krannich Support)



Metal seam roof

Mounting systems	 <p>Seam roof with SingleRail, SolidRail, Ribclamp</p>		
System structure / Rail concept	continuous rails with direct connection to metal roofing by seam clamp		
Rail type	SingleRail	SolidRail	
Rail length (m)	2,25 3,30 4,40 5,50		
Roof fixing	seam clamp in various designs and shapes		
Fixing points	metal roofing		
Module clamps	for 30 - 50 mm frame height in black or silver		
Notes	due to contact corrosion, ensure suitable material of the seam clamp		



Corrugated fibre cement panels (Eternit)

Mounting systems	 <p>Hanger bolt with SingleRail, SolidRail, Insertion System</p>		
System structure / Rail concept	roof parallel / single or double layer with continuous rails		roof parallel / Insertion System (always double layer)
Rail type	SingleRail	SolidRail	SolidRail + InsertionRail
Rail length (m)	2,25 3,30 4,40 5,50		
Roof fixing	hanger bolt (wood) or solar fastener (wood + steel)		
Fixing points	roof substructure		
Module clamps	for 30 - 50 mm frame height in black or silver	InsertionRail black or silver, for 35 and 40 mm frame height	
Notes	ensure sufficient beam thickness of the roof substructure	mounting system only possible with double-layer	



Flat roof

Mounting systems							
	Dome V (South + E/W)		Dome 6.10 (South + E/W)				
System structure	low ballast, aerodynamic flat roof system without roof penetration for bitumen, membrane, gravel and green roofs						
System	S-Dome V 10	S-Dome V 15	D-Dome V	S-Dome 6.0	S-Dome 6.10	S-Dome 6.15	D-Dome 6.10
Alignment	South		East-West	Roof parallel	South		East-West
Continuous rail concept	No			Yes			
Module angle	10°	15°	10°	0°	10°	15°	10°
Module length (mm)	1550 to 1760 / 1800 to 2100			1448 to 2390			
Module width (mm)	950 to 1053			950 to 1170			
Notes	also available as 15° S-Dome V			very low-ballast system, pre-assembled components, can be used for wide modules			



ANY QUESTIONS?

LEADER IN GLOBAL SOLAR DISTRIBUTION


OVER 750
EMPLOYEES


OVER
25 YEARS EXPERIENCE


+25 BRANCHES


DELIVERING TO OVER
100 COUNTRIES


krannich

Krannich Solar Energy (PTY) LTD
602 Touchstone House
7 Bree Street, Cape Town, 8000

+27 21 276 5490
info@za.krannich-solar.com

global solar distribution