



## Products and Brands 2022

global solar distribution





*„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.“*

*Uwe Harnisch*



# TURNING CONVICTION INTO ACTION

## 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.

## 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.





## 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.


**AXITEC**
[www.axitecsolar.com](http://www.axitecsolar.com)

**New: residential storage Li SV 1/ Li SV 2**
**AXITEC**


#### Short Facts

- + German guarantor
- + Excellent quality

#### Modules

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

#### Energy storage

- + High-performance Li-ion storage with maximum efficiency for home, e-mobility and commercial applications
- + Compatible with inverters from GoodWe, Kostal, SMA and Sungrow

#### EV-Charger

- + Charging station with high efficiency of 11 kW for smart e-mobility
- + Can be used for all cars with a type 2 plug

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.



**BRC SOLAR**  
www.brc-solar.de



**BRC**  
SOLAR

BRC Solar is a German company founded in 2018, which harnesses the unused potential of photovoltaics. With craftsman-friendly and easy-to-use products they realize their vision to drive the solar industry forward.

#### Short Facts

##### Power Optimizer

- + Optimizes shaded photovoltaic systems
- + Compatible with every inverter brand
- + Plug & Play
- + Long-Life-Electronics
- + Warranty of 25 years

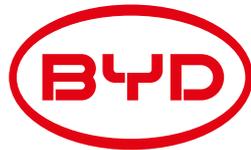
##### EV-Charger

- + Modern design
- + Easy mounting, optional mounting pole
- + Integrated display which shows charging process information
- + Monitoring (also via App)
- + 3-Way-Access via Plug & Charge, RFID card and app





**BYD**  
www.byd.com



BYD Company Ltd. is a Chinese high-tech company specializing in IT, automotive industry 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





Founded in 1971, the Delta Group has many years of experience in the development and production of electronic components. Since 1999, the Delta Group has also been applying this great expertise to the production of transformerless PV inverters for residential, commercial and industrial installations. The robust, safe and highly efficient solar inverters enable highest yields even under difficult operating conditions.

#### Short Facts

- + High-efficiency single and three-phase string inverters from 2.5 to 250 kW
- + Easy to handle and install
- + Flexible configuration
- + Multi-MPP tracker
- + Highly professional customer support with over 20 years of experience





EASSEE  
www.easee.com

KfW eligible



easee®

Easee was established in January 2018 by 3 Norwegian entrepreneurs & friends, as an idea of creating the world's smartest electric vehicle charger, resulting in our Easee Charging Robots Easee-Home and Easee-Charge. Today the company continues to develop their innovative solutions for charging and power management technology, to provide an ecosystem that will give customers a seamless experience from A to Z. Easee develops, designs and manufactures its products in Scandinavia and currently exports to 17 countries in Europe.

#### Short Facts

- + Fully dynamic charging power from 1.4 to 22kW
- + Continually learns and optimally adapts to your needs
- + Uses all available capacities for the highest possible charging power
- + Suitable for all e-cars and electricity grids
- + Easee installation app for Android and iOS

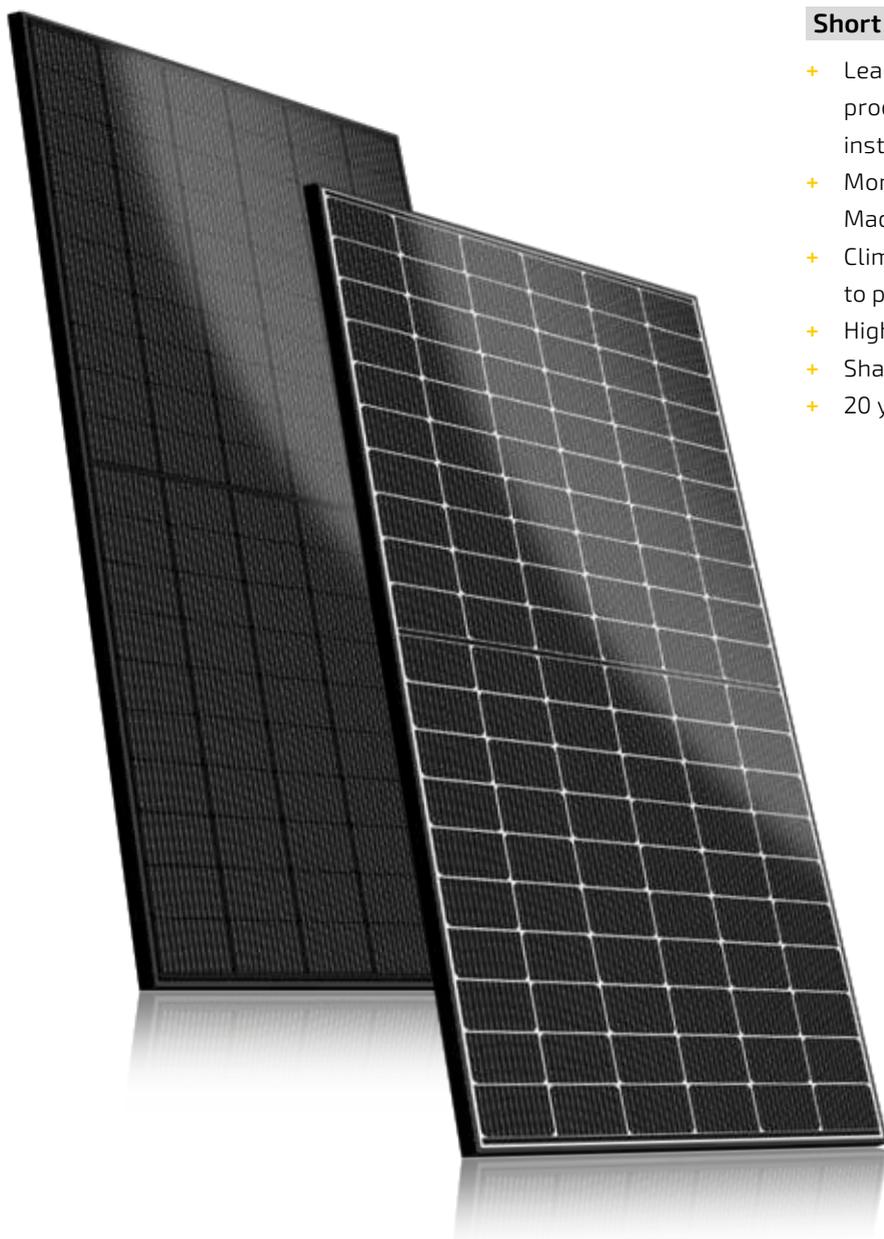


Made in Austria

ENERGETICA  
www.energetica-pv.com



Energetica Industries GmbH from Liebenfels/Austria is specialized in the industrial production of photovoltaic modules. Energetica relies on its own patents and has the largest and most modern European production for PV modules at Industry 4.0 level with a continuously increasing production capacity. This makes the modules among the most technically advanced products in the industry.



#### Short Facts

- + Leading European brand for high-end series products in the field of PV roof and ground installations
- + More than 25 years of Solar Power  
Made in Austria
- + Climate neutral production in Austria according to patented process
- + Highly efficient 12-busbar technology
- + Shading and temperature management
- + 20 years warranty





# ENPHASE ENERGY

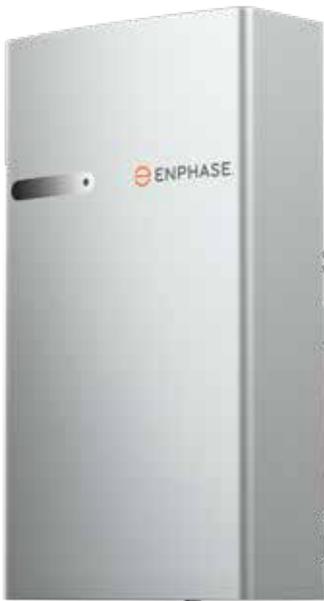
[www.enphase.com](http://www.enphase.com)



## Battery solution with microinverter



Enphase Energy is a global solar technology company that has been providing residential photovoltaic systems and residential storage solutions since 2006. The company has revolutionized the solar industry with its microinverter-based technology and produces a fully integrated solar-plus-storage solution. Enphase has shipped more than 42 million microinverters. Approximately 1.9 million Enphase-based systems are deployed in more than 130 countries.

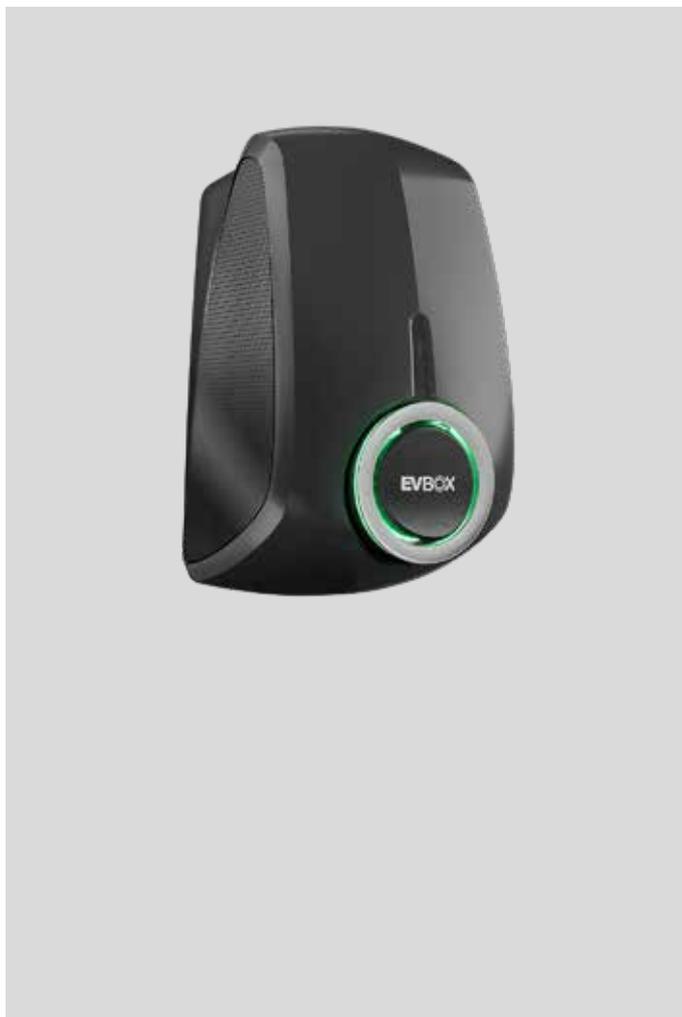


### Short Facts

- + Complete portfolio for PV and storage solutions from one supplier: universal AC battery storage solutions and microinverters
- + Extremely low failure rate, safety and reliability
- + Easy expansion and upgrades of existing PV and storage systems
- + Optimized for high power modules
- + Maximum safety, thanks to AC technology and fast shutdown
- + Installers benefit from the ability to increase sales, simplify labor and procurement processes, and save costs
- + Remote software and firmware upgrades
- + Industry-leading service and support



KfW eligible

EVBOX  
www.evbox.com

## EVBOX

Founded in 2010, EVBox helps forward-thinking businesses to create a sustainable future by providing flexible and scalable charging solutions for electric vehicles. With its range of commercial and ultra-fast charging stations and scalable charging management software, EVBox ensures that electric mobility is accessible to all. Backed by ENGIE, EVBox is at the forefront of research and development, with offices across Europe and North America developing breakthrough charging technologies for electric vehicles. Together with its partners and customers, EVBox is creating a sustainable future for transport.

### Short Facts

- + Flexible with fixed cable or socket-only version
- + Can be set to autostart
- + Remote control and monitoring
- + Automatic reimbursement of charging costs
- + Easy to install and maintain



**FIMER**  
www.fimer.com



## New: Residential hybrid Power platform



# FIMER



FIMER is one of the biggest European players and renewable energy equipment suppliers operating at a global level. Specializing in solar inverters and e-mobility systems, it offers a comprehensive solar solutions portfolio across all applications. With a presence in over 20 countries with local training centers and manufacturing hubs, FIMER remains close to its customers and the ever-evolving dynamics of the energy industry.

### Short Facts

- + Quality products Made in Italy
- + Wide product portfolio: single and three-phase inverters and string inverters with integrated energy storage system for residential, C&I and utility applications and commercial applications
- + Modularity and flexibility of the systems
- + Service excellence through customer support, pre- and post-sales services



## EV-charger KfW eligible



FRONIUS  
www.fronius.com



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.

### 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





**GOODWE**  
www.goodwe.com



## GOODWE

GoodWe is 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 35 GW, the 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 and utility scale
- + Single and three-phase PV, hybrid and storage inverters and batteries
- + 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 with local support / teams



KfW eligible

**HARDY BARTH**  
www.echarge.de



**HARDY BARTH**  
emobilität

The Hardy Barth company, 1997 as a one-man trading company for electrical products founded, is now divided into three business areas employed. In addition to the electrical engineering, energy and electrical planning belongs above all to the area Electromobility to the scope of services. hardy Barth offers extensive complete packages with Charging station, energy meter and software for the intelligent charging of electric cars and Integration into smart home systems

### Short Facts

- + Wall boxes and charging stations for private up to public area
- + Simple wall mounting or free-standing on a pedestal
- + Networking with PV inverters
- + Own development and production – Made in Germany
- + Charging power 3.7 to 22 kW
- + Up to 4 charging points in one charging station





# HUAWEI

[www.solar.huawei.com](http://www.solar.huawei.com)

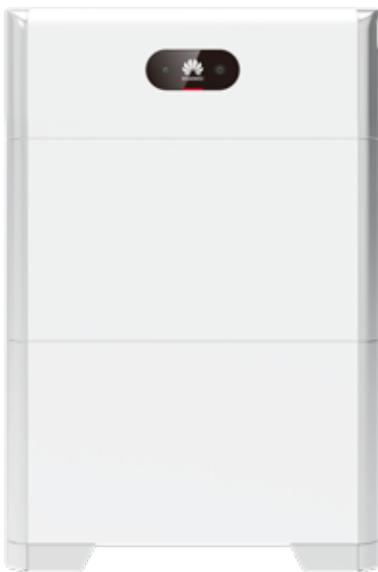


Huawei is an international leader in advanced and efficient solar technology. The company's inverters, optimizers, and batteries are used around the world to increase the profitability of installations and provide more electricity for self-consumption. Huawei provides leading smart PV solutions that incorporate more than 30 years of experience in digital information technology. Huawei aims to build efficient, intelligent O&M systems and install safe, reliable, and grid-supporting smart PV systems. This is to help customers maximize return on investment over the lifetime of Huawei's solar assets.

Huawei FusionSolar stands for sustainability and a consistent energy transition with benefits for everyone: the environment, the operators, and the consumers.

### 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 expandable up to 30 kWh
- + Flexible planning





## INTILION

Part of the HOPPECKE Group

INTILION GmbH is a 100% subsidiary of Accumulatorenwerke HOPPECKE Carl Zoellner & Sohn GmbH. The company was spun off in 2019 and has since focused on the development and production of qualitatively safe, innovative and individual lithium-ion energy storage solutions in indoor and outdoor applications. INTILION is the market leader in critical, system-relevant energy infrastructures and convinces its customers in particular with its holistic approach, high-quality products and competent service.

### Short Facts

- + Highest safety standards for fire & lightning protection as well as IT security
- + Modular and flexible expandable battery storage system at the power and capacity level
- + Maximum life cycle of the battery cells
- + Can be set up outdoors and indoors
- + Europe-wide service and maintenance concept by HOPPECKE
- + More than 90 years of experience in the development and manufacture of electrochemical energy storage systems by HOPPECKE





JA SOLAR  
www.jasolar.com

## Tier-1 solar modules

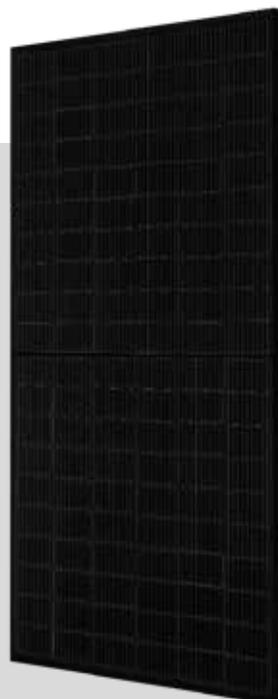
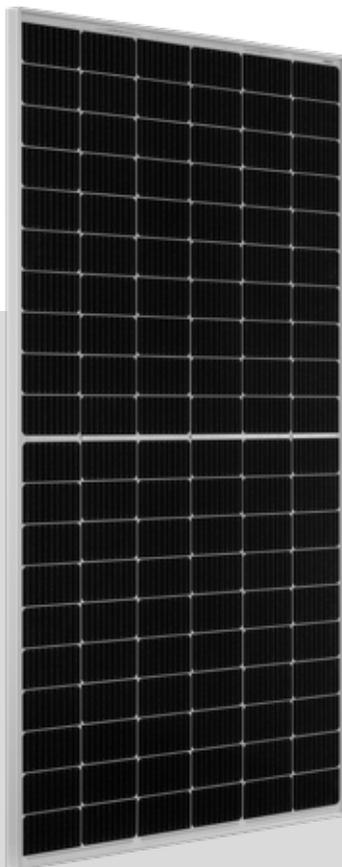


# JA SOLAR

JA Solar was founded in 2005 and is one of the world's leading manufacturers of high-performance photovoltaic products. JA Solar has a vertically integrated manufacturing of wafers, cells and modules with a cumulative total supply of 73 GW. The Chinese company leverages its strengths in PV research and development to continuously optimize its unique cell manufacturing and module building technologies.

### Short Facts

- + World market leader in monocrystalline cells
- + Low loss in shading and higher output power
- + 12 years warranty
- + Outstanding price-performance ratio
- + Global sales and service networks
- + Claim to technology leadership: M10 wafers



Made in Germany

KACO NEW ENERGY  
www.kaco-newenergy.com



**K A C O**   
new energy.

KACO new energy, a subsidiary of Siemens AG, Short Facts is one of the world's largest manufacturers of inverters for feeding solar power into the grid. In addition to grid-connected string inverters, the product range includes hybrid and battery inverters for energy storage. Since 1999, the Neckarsulm, Germany-based company has shipped inverters with a cumulative capacity of more than 17 GW.

#### Short Facts

- + CO<sub>2</sub>-neutral production
- + Made in Germany
- + Three-phase PV and hybrid inverters for use in photovoltaic power plants, commercial solar parks and small solar power systems
- + Spare parts guarantee
- + Commissioning support





**K2 SYSTEMS**  
www.k2-systems.com

## 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

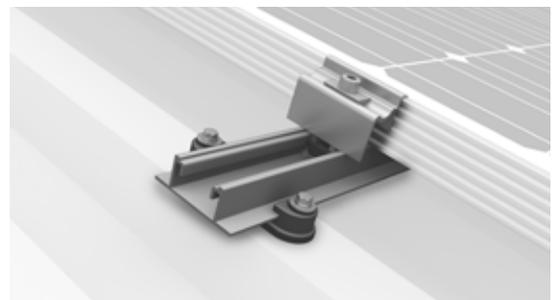
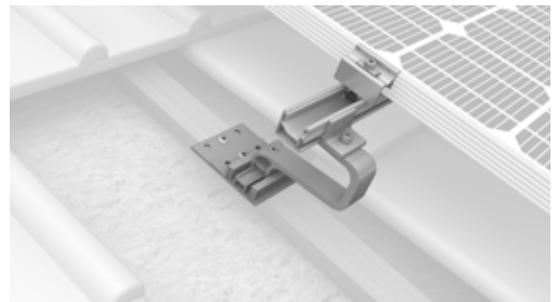
- + All-rounder with only 4 installation steps - also suitable for high loads
- + Floating and with controlled thermal linear expansion

#### 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





## Standing seam metal 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
- + SolidRail with solar panel anchor bolt

## Corrugated fiber cement and sandwich-panels

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

## Flat roof

### Dome 6 System

- + Pre-assembled for time-saving installation or as an unassembled long rail system for cost efficiency
- + Single sided 10 and 15 elevated available
- + 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





**KIOTO**  
www.kiotosolar.com

## Approval for overhead mounting



As a producer of high-quality photovoltaic modules with "Made in Austria" quality, Kioto Solar is the market leader in Austria and also distributes them throughout Europe. What started in a garage in 1991 quickly developed into a steadily growing business. New business areas such as the development and production of fresh water and stratified charging modules were added. In 2005, KIOTO SOLAR finally started the production of photovoltaic modules. Since then, around 1,600 modules leave the production line every day.

### Short Facts

- + Highest product quality
- + Resource-saving and highly automated production processes
- + Special low-reflection Deflect solar glass with very high solar transmittance
- + Technical documentation (measurement protocols and glare reports) possible
- + Extended hail tests: qualification for HW4



New: ENECTOR Wallbox

KOSTAL SOLAR ELECTRIC

[www.kostal-solar-electric.com](http://www.kostal-solar-electric.com)



## KOSTAL

KOSTAL Solar Electric was founded in 2006 as a separate branch of KOSTAL Industrie Elektrik. Today, the company is one of the leading suppliers of innovative solar, hybrid and battery inverters - for private and commercial systems. The KOSTAL Smart Energy Meter, the KOSTAL Solar Portal and the Solar App as well as the new KOSTAL Wallbox round off the innovative product portfolio. KOSTAL customers thus have all the central tools for intelligent generation, storage, control and use of solar energy.



### Short Facts

- + String, hybrid and battery inverters – successfully tested independently several times
- + New: KOSTAL Wallbox with different solar charging modes in use with KOSTAL Smart Energy Meter
- + KOSTAL Smart Energy Meter – energy meter for monitoring, regulation, control of various compatible applications
- + High compatibility of KOSTAL products to other sectors such as heat, climate, energy management, storage and e-mobility
- + Everything at a glance – free access to the KOSTAL Solar Portal and the KOSTAL Solar App
- + Easy installation and commissioning – new, via Solar App with PRO function
- + Development and production in Germany
- + Service and warranty according to European standard





# LG ELECTRONICS

[www.lg.com](http://www.lg.com)



The Korean global corporation is one of the world's leading companies for consumer electronics and household appliances. Though LG Electronics closed the solar business, the company will now focus on the Energy Storage System (ESS) business. LG Electronics offers a combined PV inverter and battery solution with the aim of providing sustainable energy supply of electricity, heating, cooling and mobility solutions to households.



### Short Facts

- + 10-year warranty from one manufacturer for battery and inverter
- + DC-coupled PV and storage solution
- + Three-phase hybrid inverter
- + Flexible system design thanks to 3 MPPTs expandable storage features
- + Plug & Play with LG Therma V (Air to Water Heat Pump) for advanced self-consumption





## LG Energy Solution

ESS Battery Division

LG Energy Solution is one of the world's largest lithium-ion battery manufacturers with a leading position in the market for advanced lithium-ion battery technology. LG Energy Solution's commitment to leading-edge technology combined with efficient and high-quality manufacturing processes enables the production of batteries that offer the highest levels of safety, performance and reliability.



### Short Facts

- + Easy to install and maintain
- + High reliability and energy efficiency
- + Compact design with high energy density
- + Compatible with inverters from GoodWe, SMA and SolarEdge
- + Only lithium-ion battery supplier with global manufacturing and R&D bases in Europe, the US and Asia





**LONGI SOLAR**  
www.longi-solar.com

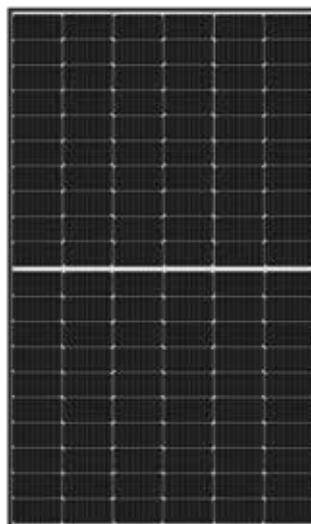
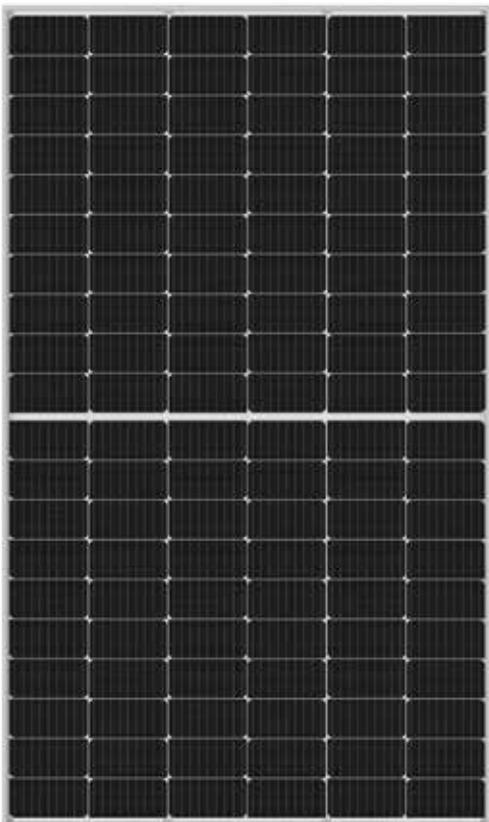
## Tier-1 solar modules

# 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

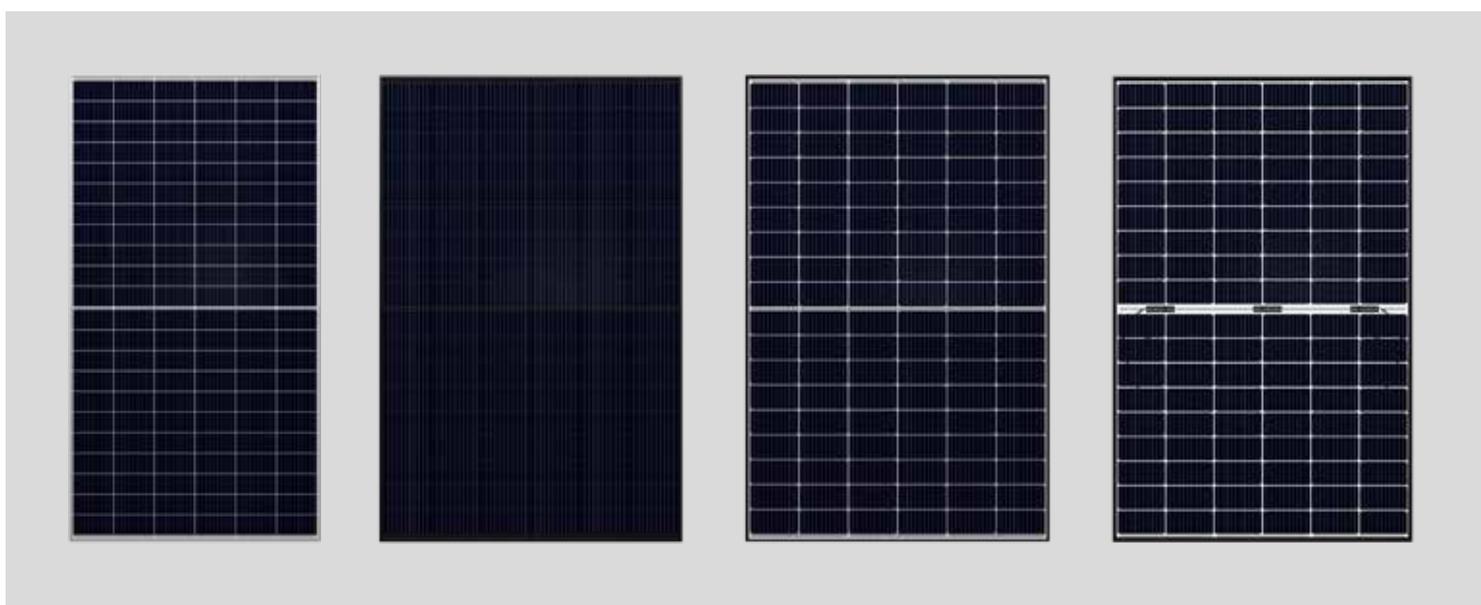




# LUXOR

*solar module manufacturer since 2007*

The solar module manufacturer Luxor Solar has many years of experience and knows exactly the requirements of the photovoltaic market as well as the customer wishes. Since 2007, the Stuttgart-based company has been designing, developing and manufacturing high-performance, reliable solar modules with the highest standards of quality, durability and efficiency. With an annual production capacity of over 800 MWp and installations in well over 85 countries, Luxor Solar is one of the established companies in the industry.



## Short Facts

- + Continuous business activity since 2007
- + Flexible solar module range for versatile applications
- + German warranty provider
- + Certified according to ISO 9001, ISO14001 and ISO 45001
- + Self-determined strategic direction
- + Very low complaint rate of less than 0.003%
- + Regular quality controls by independent institutes





**MENNEKES**

[www.chargeupyourday.de](http://www.chargeupyourday.de)

Wallbox KfW eligible

## **MENNEKES**

MY POWER CONNECTION



MENNEKES Elektrotechnik GmbH & Co. KG is a leading international manufacturer of industrial plugs and sockets and a supplier of electromobility solutions and vehicle components. Founded in 1935, the German company is now present in over 90 countries with subsidiaries and representatives. MENNEKES places particular emphasis on the manufacturing quality and safety of its products. In the field of electromobility, the product range includes technically mature and practical wallboxes, intelligent and networked charging stations, vehicle plugs and charging cables, and billing solutions.

### Short Facts

- + Products Made in Germany
- + Product development and manufacturing from one source
- + Charging stations for use in the private & semi-public sector
- + Charging stations for use in the public & semi-public sector
- + Charging power up to 22 kW
- + Type 2 plug





Meyer Burger started the production of high-performance solar cells and solar modules. Its proprietary Heterojunction/ SmartWire technology makes this possible companies to set new standards in terms of energy yield put. With solar cells and modules developed in Switzerland and in Germany under sustainable conditions be manufactured, Meyer Burger wants to become a leader European photovoltaic companies are growing. Currently the company employs around 1000 people Research

facilities in Switzerland, development and Production facilities in Germany and at sales locations in Europe, USA and Asia. Meyer Burger was founded in Switzerland in 1953 and has in recent decades as a supplier of production systems the development of the global photovoltaic industry shaped along the entire value chain essential industry standards. A large part of solar modules produced worldwide today is based on Technologies developed by Meyer Burger.



#### Short Facts

- + Made in Germany. Designed in Switzerland
- + Patented technology: Extremely durable and break-resistant thanks to the SmartWire grid structure
- + Maximum performance and up to 20% more energy yield same area
- + Aesthetic and high-quality Swiss design for all roof shapes
- + Product and performance guarantee of up to 30 years
- + Production in Germany exclusively renewable energy sources





**PYLONTECH**  
www.pylontech.com.cn



### Short Facts

- + High-voltage lithium-ion batteries
- + Easy to retrofit, as each unit has its own BMS
- + Compact and modular design, for easy installation and upgrading
- + Guarantee of highest safety values and most promising life cycle by using own Lithium iron phosphate cells
- + Compatible with GoodWe and Sungrow inverters

Founded in 2009, Pylontech is now a global player in the storage market. With key technologies developed in-house and a commitment to energy storage systems (EES), Pylontech has pioneered the global ESS market as of 2013. In doing so, the storage manufacturer convinces with a unique vertical integration of all required technologies for energy storage systems. This makes Pylontech the ideal partner for any storage project.



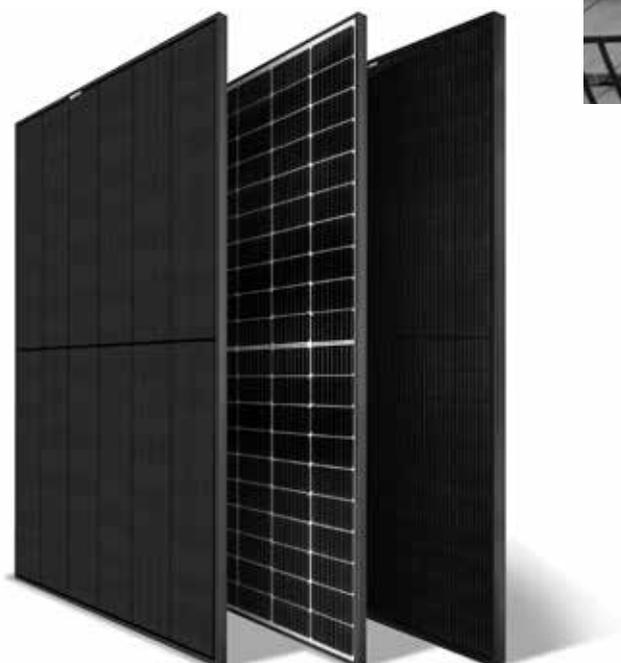
## Tier-1 solar modules

REC  
www.recgroup.com



REC Group is a leading international solar energy company dedicated to providing consumers with access to clean and affordable solar energy through high-quality solar modules with leading power density. True to its motto "Solar's Most Trusted", REC is known for patented innovations and award-winning products that deliver reliable long-term performance. The high reliability is based on advanced and highly efficient manufacturing with Industry 4.0 processes.

Founded in Norway in 1996, the company has always focused on a low carbon footprint of its solar modules and materials. REC Group is headquartered in Norway, has an operational headquarters in Singapore and regional headquarters in North America, Europe and Asia Pacific.



### Short Facts

- + Multiple award-winning high-performance modules with heterojunction and monocrystalline p-type technologies
- + Reliability of an European brand
- + Standard 20-year product warranty, extended warranty coverage through REC Certified Solar Professionals
- + Hardly any light-induced degradation
- + Robust and reliable: withstand loads up to 7,000 Pa
- + Lowest complaint rate, high level of safety
- + Sustainability throughout the entire life cycle



SMA  
www.sma.de



## New: SMA string inverter STP X



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 110 GW. SMA's award-winning technology is protected by around 1,700 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, hybrid inverter, 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
- + CO<sub>2</sub>-free production at the highest standard with 21 GW annual capacity in Germany

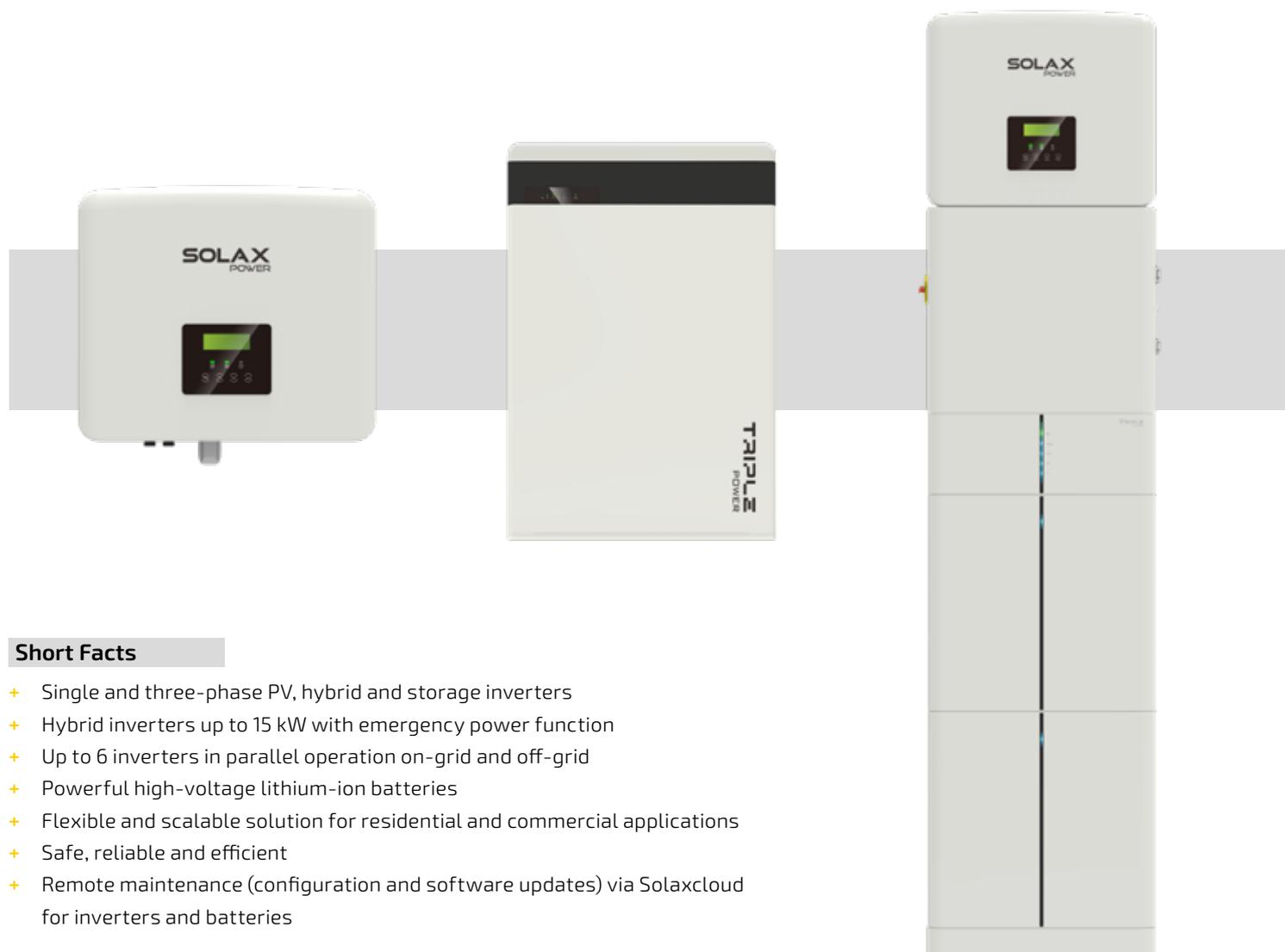


## New: All in one storage system

**SOLAXPOWER**  
solaxpower.com



Since its establishment in 2010, SolaX has grown year by year to become a globally recognized international company. Its products are designed, tested and manufactured to the highest standards. The company is driven by its commitment to research and development and works intensively with Zhejiang University, one of the leading research universities in China.



### Short Facts

- + Single and three-phase PV, hybrid and storage inverters
- + Hybrid inverters up to 15 kW with emergency power function
- + Up to 6 inverters in parallel operation on-grid and off-grid
- + Powerful high-voltage lithium-ion batteries
- + Flexible and scalable solution for residential and commercial applications
- + Safe, reliable and efficient
- + Remote maintenance (configuration and software updates) via Solaxcloud for inverters and batteries



SolarEdge  
www.solaredge.de



## New: SolarEdge Energy Hub inverter with

In 2006, SolarEdge revolutionized the photovoltaic industry with the invention of a more efficient system for energy harvesting and PV system energy management. Today, SolarEdge is a global leader in smart energy technology. Through engineering excellence and a consistent focus on innovation, SolarEdge creates smart energy products and solutions that meet everyday energy needs and drive future progress.

The SolarEdge system leaves nothing to be desired. In a scalable architecture, inverters and power optimizers integrate as needed, smart modules, electric vehicle charging solutions, smart home devices and back-up options. At the heart of it all, the new SolarEdge Energy Operating System intelligently manages the energy needs of system owners.

**solar**edge



## sector coupling, batteries and EV charger

### Short Facts

#### Modules

- + Optimized energy yield through continuous module-accurate MPP tracking
- + Easy to install modules with pre-mounted power optimizer

#### E-Mobility

- + Charging solution for private electric vehicles that seamlessly integrates into the overall SolarEdge ecosystem
- + Control and monitoring via the mySolarEdge app, including remote control, smart scheduling and charging history

#### Inverter

- + Single-phase inverters with HD Wave technology: small, lightweight and easy to install
- + Three-phase inverters with Synergy technology: optional surge protection and DC fuses > 97% weighted efficiencies
- + Quick and easy commissioning directly from your smartphone with the SolarEdge SetApp
- + 12 year standard warranty
- + Free monitoring and worldwide service hotline

#### Storage

- + SolarEdge Energy Bank 10 kWh battery
- + Product warranty 10 years

#### Power optimizer

- + Very high efficiency (99.5% peak efficiency, 98.8% weighted efficiency)
- + 25 year power optimizer warranty





**SOLITEK**  
www.solitek.eu

Made in Europe

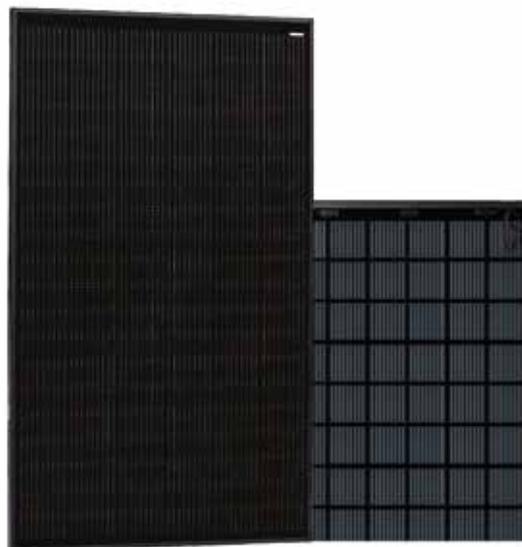


**SOLI**  **TEK**

SoliTek is a European supplier of PV cells and modules with headquarters and manufacturing facility in Vilnius, Lithuania. SoliTek researches, develops, manufactures, sells and installs high-quality glass-glass as well as standard solar modules for the residential and commercial sectors. The company not only provides highly durable products for energy generation, but also makes every effort to do so in the most environmentally friendly way possible. Currently, SoliTek is aiming to expand its production capacity up to 180 MW.

#### Short Facts

- + High performance solar module glass-glass bifacial
- + 30-year efficiency and product warranty
- + 87% performance guarantee
- + Ideal for all weather conditions
- + Production in Europe under environmentally-friendly aspects
- + Cradle to Cradle Certified: including use of ecologically safe materials, material recycling, use of renewable energies



## The No. 1 for inverters

**SUNGROW**  
www.sungrowpower.com



**SUNGROW**  
Clean power for all

Sungrow Power Supply Co., LTD is the world's leading inverter specialist and the only brand receiving the highest recommendation in the area of financeability by the Bloomberg Institute for the third year in a row in 2021. As the largest inverter manufacturer in the world, Sungrow has installed more than 224 GW of solar energy to date (as of Q1 2022). Founded in 1997 by Prof. Cao Renxian, the green tech company's top priorities are continuous innovation and the highest quality. With more than 2,600 R&D employees, Sungrow provides

the largest R&D team in the industry.

Sungrow's broad product portfolio offers the right device for every application - from photovoltaic inverters and storage solutions for utility, commercial and residential to world-leading systems for floating installations.

With more than 25 years of clean energy experience, Sungrow offers its customers maximum safety and expertise in over 150 countries worldwide.



### Short Facts

- + Single and three-phase PV and hybrid inverters
- + Inverters suitable for various application scenarios (Residential & Commercial)
- + Lithium-ion batteries
- + High quality standards
- + Largest R&D team in the industry





SUNTECH POWER

[www.suntech-power.com](http://www.suntech-power.com)

Tier-1 solar modules



 **SUNTECH**

Suntech, founded in 2001, is a world-renowned photovoltaic manufacturer that has been dedicated to the research and development and production of crystalline silicon solar cells and modules for more than 20 years. The sales territories of the Chinese company cover more than 100 countries and regions around the world, and total shipments to date already exceed 30 GW.



#### Short Facts

- + Products with high flexibility in design and application
- + Continuous innovation
- + 15 years product warranty
- + Strict quality control according to the highest international standards
- + Stands up to harsh environments
- + Excellent low light performance



## Tier-1 solar modules

TALESUN SOLAR  
www.talesun-solar.com



TALESUN Solar, a wholly owned subsidiary of Zhongli Group, was established in China in 2010. Through more than 12 years of innovation and development, the company has become one of the world's top 7 photovoltaic manufacturers and Tier -1 module suppliers in Bloomberg ranking. The international premium manufacturer of solar cells and residential and commercial solar modules has fully automated production facilities in China as well as Thailand and exports to more than 50 countries.

In total, TALESUN is expected to achieve an annual capacity of 16 GW of monocrystalline silicon high-performance cells and 20 GW of 182 / 210 mm solar modules.



### Short Facts

- + Own research and development center with more than 350 employees
- + One of the few Chinese companies with VDE quality certificate
- + 12 years product warranty
- + Low degradation of the modules





**TIGO ENERGY**

www.tigoenergy.com

**Tigo**<sup>®</sup>

Tigo Energy, the worldwide leader in Flex MLPE (Module Level Power Electronics), designs innovative solar power conversion and storage products that provide customers more choice and flexibility. The Tigo TS4 platform increases solar production, decreases operating costs, and enhances safety. When combined with the Tigo Energy Intelligence (EI) platform, it delivers module, system, and fleet-level insights to maximize solar performance and minimize operating costs. The Tigo EI Residential Solar Solution, a flexible solar-plus-storage solution for home installations, rounds out the company's portfolio of solar energy technology. Tigo was founded in Silicon Valley in 2007 to accelerate the adoption of solar energy, and its global team supports customers whose systems reliably produce gigawatt hours of safe solar energy on seven continents.



#### Short Facts

- + Increase of energy yields
- + Flexible to use for optimization, monitoring and fast shut-down
- + Works with major modules and inverters
- + Has the lowest failure rates in the industry
- + Water and corrosion resistant
- + No ground wire required
- + The exclusive Reclaimed Energy feature quantifies the amount of additional energy enabled by Tigo optimizers

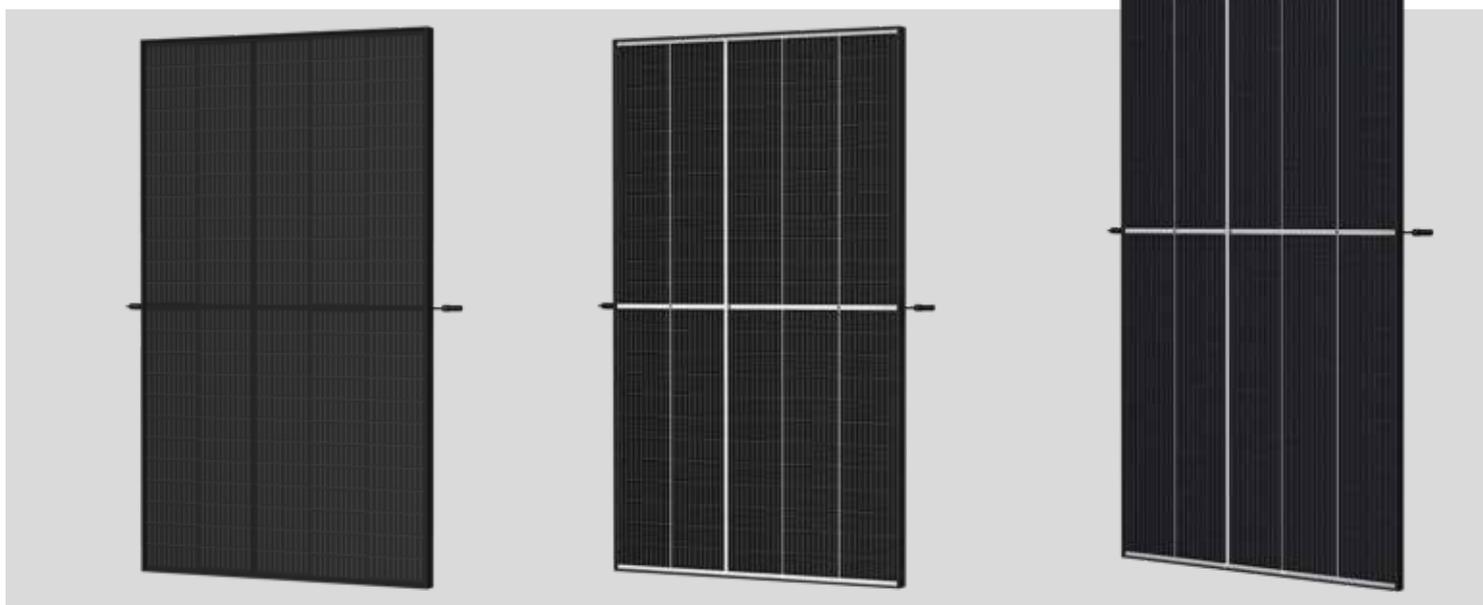
## Tier-1 solar modules

TRINA SOLAR  
www.trinasolar.com



# Trinasolar

As one of the first Chinese PV companies, Trina Solar is now one of the world's leading manufacturers of crystalline photovoltaic modules. Founded in 1997, the company regularly breaks world records in solar cell efficiency and solar module output power. With 2,000 photovoltaic patents already filed, Trina is an industry leader in research and development, always striving to advance photovoltaics and drive new technologies



### Short Facts

- + Sustainable production
- + Active promotion of technological innovations
- + Fully certified for a wide range of environmental impacts
- + Continuous quality control at every step of production
- + 210 mm silicon wafer
- + High resistance to hot spots and overtemperature
- + 15-year product warranty





TSC

[www.solaria.com/europe](http://www.solaria.com/europe)

## Pure Black Module



**TSC™**  
High Performance Solar



TSC is a global PV technology company with a strong track record and 20-year history in solar energy innovation and product development. TSC is the European division of a U.S. Silicon Valley company that has been in the photovoltaic industry for 20 years and has more than 250 issued and pending patents for solar cell and solar module technologies. TSC and its parent company are industry leaders in the manufacture of high-performance Pure Black™ solar modules for residential and commercial applications.



### Short Facts

- + Aesthetic design in Pure Black
- + Patented construction of the modules
- + High reliability and low error sources due to solderless cell connections
- + Low system costs due to low use of system components such as rackings and cables
- + Product warranty of 25 years

Made in Germany

VARTA  
www.varta-ag.com/energiespeicher



VARTA AG produces and markets a comprehensive battery portfolio ranging from microbatteries, household batteries and energy storage systems to customised battery solutions. The company has been setting industry standards as a technology leader with more than 130 years of battery expertise Made in Germany. The comprehensive assortment of energy storage systems in the home and large-scale storage market range from compact entry-level models to large-scale storage.



### Short Facts

- + More than 130 years of battery expertise and quality Made in Germany
  - + Integrated battery inverter for perfectly fit for retrofitting or new installations
  - + Future-proof and flexible: Storage capacity can be expanded at any time, even after installation
  - + Easy integration and connection of various devices and applications such as energy sources, inverters, heat sources, charging stations and smart home applications
  - + Intelligent energy management system ensures optimal utilization of the self-produced solar energy and significantly increases self-consumption
  - + Installation: Easy to install thanks to plug & play technology
  - + Warranty: 10 year warranty on the battery modules and up to 10 years on the residential storage system (permanent internet connection required)\*
- \*except flex storage system





VIRIDIAN

[www.viridiansolar.com](http://www.viridiansolar.com)



In-roof system



Founded in 2003 by Cambridge University engineers, Viridian Solar has built a reputation for producing high-quality rooftop integrated solar energy. In addition to top quality and easy installation, the All in One in-roof solar systems offer a new aesthetic for photovoltaic systems through the integrated PV modules.



#### Short Facts

- + Aesthetic advantages of roof-integrated solar modules
- + Wind resistance four times higher than competitive products
- + Prices comparable to rooftop systems
- + Universally applicable regardless of roof type
- + The only in-roof solar system to achieve the highest rating in all four European fire safety tests



Made in France

VOLTEC SOLAR  
www.voltec-solar.com



Ultra-Low carbon footprint PV modules, produced at the French / German border. From 375W to 450W, Voltec Solar has been producing PV for more than 10 years and it is today one of the largest producers in Europe and the best eco-design label worldwide.

The raw materials are mainly sourced in Europe, their production processes and transports have been selected to reduce environmental impacts and to allow the greatest supply chain transparency.

#### Short Facts

##### **Carports, commercial rooftops and ground mount from 390 to 450Wp**

- + Smart and patented half-cut design
- + Up to 50% longer strings
- + Unique junction box
- + Bifacial as option, up to 70% transparency for Agri PV
- + Low carbon footprint certificate

##### **And residential rooftops from 375 to 405Wp**

- + Full black design
- + 20 years product warranty
- + Optimisers and micro inverters compatible





# ACCESSORIES

Kabel



Steckverbinder



Werkzeug



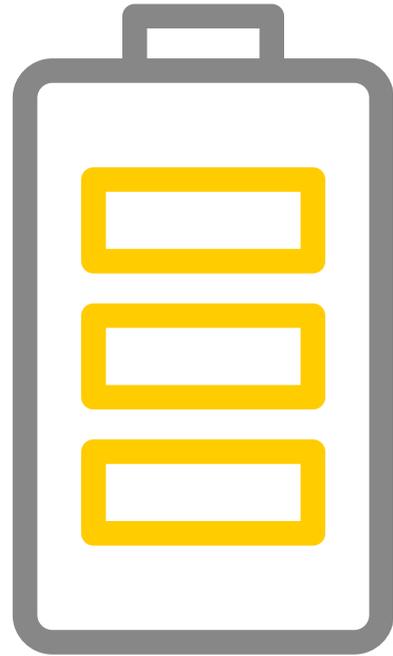
Interfaces & connection boxes + PID solution +  
PV Thermie + Power supply accessories + Other accessories

Further information  
in our webshop!



## OVERVIEW

# STORAGE SYSTEMS



RESIDENTIAL  
**COMMERCIAL**  
EMOBILITY

Inverter  
manufacturer

 ENPHASE.



<b>Storage inverter type</b>		Enphase Energy AC Storage System 3T	Enphase Energy AC Storage System 10T	ABB REACT: 2-UNO-3.6-TL/ 2-UNO-5.0-TL*
<b>Max. PV system size (kWp)</b>		AC: no limitations		DC: 5.0 / 6.0 AC: no limitations
<b>AC phases</b>	1	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	3	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
<b>Surge Protection Device</b>	AC	-	-	-
	DC	-	-	-
<b>Bat.-coupling</b>	AC (Bat.-Inv)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
	DC (Hybrid)	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
<b>Bat. charging via separate PV inverter (AC-coupling)</b>		<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Manufacturer storage</b>				
<b>Storage type</b>		AC Storage System		ABB (integrated)
<b>Max. power charge / discharge (kW)</b>		per 1.28	per 3.84	1.6 to 4.8* / 2.0 to 5.0*
<b>Usable capacity (kWh)</b>		per 3.5	per 10.5	4.0 to 12.0
<b>Expandable / Time window from commissioning</b>		unlimited		unlimited
<b>Emergency power (separate AC clamp)</b>		<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
<b>Battery backup light (backup connection inverter, i.n. transfer switch)</b>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Full battery backup (automatic transfer switch)</b>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Off-grid battery recharge</b>		<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
<b>System informations</b>		module inverter with 1-/3-phase AC-coupled storage system, additional accessories are required for data acquisition		1-phase DC coupled storage system; AC coupling additionally possible
<b>Solutions for larger storage system configurations</b>		1-/3-phase AC coupled storage system with suitable number of micro inverters		1-phase hybrid device with additional PV inverter via AC coupling

\*Limited to 4,6 kW in single-phase operation in Germany (VDE-AR-N 4105), // \*\*With suitable PV inverter // \*\*\* Release according to deadline manufacturer / Depending on the country settings, there may be limitations on the AC connection power. // All data under reservation according to the manufacturer's approval. [Observe the notes at the end of the document.](#)

Inverter  
manufacturer



<b>Storage inverter type</b>		Hybrid 3.0-3-S/ 4.0-3-S/ 5.0-3-S	PRIMO GEN24 3.0 / 3.6 / 4.0 / 4.6 / 5.0 (not GER) / 6.0 (not GER)		SYMO GEN24 3.0 / 4.0 / 5.0 PLUS***	SYMO GEN24 6.0 / 8.0 / 10.0 PLUS	
<b>Max. PV system size (kWp)</b>		DC: 5.0 / 6.5 / 8.0 AC: no limitations	DC: 4.5 to 6.9 AC: no limitations		DC: 4.5 to 15.0 AC: no limitations		
<b>AC phases</b>	1	<input type="radio"/>	<input checked="" type="radio"/>		<input type="radio"/>		
	3	<input checked="" type="radio"/>	<input type="radio"/>		<input checked="" type="radio"/>		
<b>Surge Protection Device</b>	AC	-	-		-		
	DC	type 1 + 2 opt.	type 1 + 2 opt.		type 1 + 2 opt.		
<b>Bat.-coupling</b>	AC (Bat.-Inv)	<input checked="" type="radio"/>	<input checked="" type="radio"/>		<input checked="" type="radio"/>		
	DC (Hybrid)	<input checked="" type="radio"/>	<input checked="" type="radio"/>		<input checked="" type="radio"/>		
<b>Bat. charging via separate PV inverter (AC-coupling)</b>		<input checked="" type="radio"/>	<input checked="" type="radio"/>		<input checked="" type="radio"/>		
<b>Manufacturer storage</b>							
<b>Storage type</b>		B-Box HVM 8.3 to 22.1	B-Box HVS 5.1 to 7.7	B-Box HVM 11 to 19.3	B-Box HVS 5.1 to 10.2	B-Box HVM 11 to 22.1	RESU FLEX 8.6 to 17.2
<b>Max. power charge / discharge (kW)</b>		3.0 to 5.0	3.2 to 6.3*	3.2 to 6.3*	3.1 to 9.0	3.1 to 9.0	4.3 to 8.5
<b>Usable capacity (kWh)</b>		8.3 to 22.1	5.1 to 7.7	11.0 to 19.3	5.1 to 30.6	11.0 to 57.9	8.6 to 34.4
<b>Expandable / Time window from commissioning</b>		unlimited	unlimited		unlimited		expected unlimited
<b>Emergency power (separate AC clamp)</b>		<input type="radio"/>	<input checked="" type="radio"/> 1-phase to PV-point		<input checked="" type="radio"/> 1-phase to PV-Point		
<b>Battery backup light (backup connection inverter, i.n. transfer switch)</b>		<input type="radio"/>	<input type="radio"/>		<input type="radio"/>		
<b>Full battery backup (automatic transfer switch)</b>		<input checked="" type="radio"/> with Enwitec Backup Box	<input checked="" type="radio"/> Backup Box must be assembled by yourself		<input type="radio"/>	<input checked="" type="radio"/> with Enwitec Backup Box	
<b>Off-grid battery recharge</b>		<input checked="" type="radio"/>	<input checked="" type="radio"/>		<input checked="" type="radio"/>		
<b>System informations</b>		3-phase DC coupled storage system; AC coupling additionally possible	1-phase DC coupled storage system; AC coupling additionally possible; For power classes 5.0 and 6.0 kW no limitation to 4.6kVA by selection VDE-AR-N 4105, therefore not applicable in GER		3-phase DC coupled storage system; AC coupling additionally possible; Substitute current function only partially usable		
<b>Solutions for larger storage system configurations</b>		3-phase hybrid device with additional PV inverter via AC coupling	1-phase hybrid device with additional PV inverter via AC coupling		3-phase hybrid device with high charging power and additional PV inverter via AC coupling		

Inverter  
manufacturer

# GOODWE

<b>Storage inverter type</b>		GW-EM / ES Hybrid 3048 (only EM) / 3648 / 5048*			GW S-BP 3600 / 5000* Retrofit		
<b>Max. PV system size (kWp)</b>		DC: 3.9 to 6.5 AC: no limitations			AC: no limitations		
<b>AC phases</b>	1	●			●		
	3	○			○		
<b>Surge Protection Device</b>	AC	-			-		
	DC	-			-		
<b>Bat.-coupling</b>	AC (Bat.-Inv)	○			●		
	DC (Hybrid)	●			○		
<b>Bat. charging via separate PV inverter (AC-coupling)</b>		●			●		
<b>Manufacturer storage</b>							
<b>Storage type</b>		RESU 6.5 to RESU 12	LVS 4.0 to 24.0	B-Box LVL 15.4	RESU 6.5 to RESU 12	LVS 4.0 to 24.0	B-Box LVL 15.4
<b>Max. power charge / discharge (kW)</b>		2.5 to 5.0*	2.5 to 5.0*	2.5 to 5.0*	2.5 to 5.0*	2.5 to 5.0*	2.5 to 5.0*
<b>Usable capacity (kWh)</b>		5.9 to 23.4	4.0 to 24.0	15.4 to 30.8	2.9 to 23.4	4.0 to 24.0	15.4 to 30.8
<b>Expandable / Time window from commissioning</b>		unlimited, up to 2 units	unlimited	unlimited	unlimited, up to 2 units	unlimited	unlimited
<b>Emergency power (separate AC clamp)</b>		● Backup port			● Backup port		
<b>Battery backup light (backup connection inverter, i.n. transfer switch)</b>		● Backup port			● Backup port		
<b>Full battery backup (automatic transfer switch)</b>		○			○		
<b>Off-grid battery recharge</b>		●			○		
<b>System informations</b>		1-phase DC coupled storage system			1-phase AC coupled storage system		
<b>Solutions for larger storage system configurations</b>		1-phase hybrid device with additional PV inverter via AC coupling			1-phase AC coupled storage system with additional PV inverter via AC coupling		

\*Limited to 4,6 kW in single-phase operation in Germany (VDE-AR-N 4105), // \*\*With suitable PV inverter // \*\*\* Release according to deadline manufacturer / Depending on the country settings, there may be limitations on the AC connection power. // All data under reservation according to the manufacturer's approval. [Observe the notes at the end of the document.](#)

Inverter  
manufacturer

# GOODWE

<b>Storage inverter type</b>		GW-EH Hybrid 3600 - 6000* GW-BH Retrofit 3600 - 6000*				
<b>Max. PV system size (kWp)</b>		DC: 4.8 to 8.0 (only EH) AC: no limitations				
<b>AC phases</b>	1	●				
	3	○				
<b>Surge Protection Device</b>	AC	-				
	DC	-				
<b>Bat.-coupling</b>	AC (Bat.-Inv)	●				
	DC (Hybrid)	●				
<b>Bat. charging via separate PV inverter (AC-coupling)</b>		●				
<b>Manufacturer storage</b>				<b>-AXITEC</b>		<b>GOODWE</b>
<b>Storage type</b>	B-Box HVS 5.1 to 12.8	B-Box HVM 11 to 22.1	96V Force-H2 7.0 / 10.5 / 14.0	AXIstorage Li SV1 14.2 to 24.9	AXIstorage Li SV2 7.1 to 14.2	Lynx Home F LX F6.6 to 13.1-H
<b>Max. power charge / discharge (kW)</b>	per 5.1 to 10.0	per 5.1 to 10.0	3.6 to 7.1	4.8 to 8.4	3.5 to 7.1	3.6 to 6.0*
<b>Usable capacity (kWh)</b>	5.1 to 38.4	11.0 to 66.3	6.4 to 12.8	13.5 to 23.6	6.7 to 13.5	6.55 to 13.1
<b>Expandable / Time window from commissioning</b>	unlimited		up to 2 years	up to 2 years		up to 2 years
<b>Emergency power (separate AC clamp)</b>	● Backup port					
<b>Battery backup light (backup connection inverter, i.n. transfer switch)</b>	● Backup port					
<b>Full battery backup (automatic transfer switch)</b>	○					
<b>Off-grid battery recharge</b>	●					
<b>System informations</b>	1-phase DC coupled storage system, BH series for AC connection					
<b>Solutions for larger storage system configurations</b>	1-phase hybrid device with additional PV inverter via AC coupling, BH series via AC coupling to matching PV inverter					

Inverter  
manufacturer

# GOODWE

<b>Storage inverter type</b>		GW ET / ET plus+ Hybrid 5K / 6.5K / 8K / 10K GW BT Retrofit 5K / 6K / 8K / 10K						
<b>Max. PV system size (kWp)</b>		DC: 6.5 to 13.0 (only ET / ET plus+) AC: no limitations						
<b>AC phases</b>	1	○						
	3	●						
<b>Surge Protection Device</b>	AC	type 2 (only ET plus+)						
	DC	type 2						
<b>Bat.-coupling</b>	AC (Bat.-Inv)	●						
	DC (Hybrid)	●						
<b>Bat. charging via separate PV inverter (AC-coupling)</b>		●						
<b>Manufacturer storage</b>								
<b>Storage type</b>		B-Box HVS 5.1 to 12.8	B-Box HVM 11 to 22.1	96V Force-H2 7.0 / 10.5 / 14.0	AXIstorage Li SV1 14.2 to 24.9	AXIstorage Li SV2 7.1 to 14.2	Lynx Home F LX F6.6 to 16.4-H	RESU FLEX 8.6 to 17.2
<b>Max. power charge / discharge (kW)</b>		per 5.1 to 10.0	per 5.1 to 10.0	3.6 to 7.1	4.8 to 8.4	3.5 to 7.1	5.12 to 10.0	4.3 to 8.5
<b>Usable capacity (kWh)</b>		5.1 to 38.4	11.0 to 66.3	6.4 to 12.8	13.5 to 23.6	6.7 to 13.5	6.55 to 16.38	8.6 to 34.4
<b>Expandable / Time window from commissioning</b>		unlimited		up to 2 years	up to 2 years		up to 2 years	expected unlimited
<b>Emergency power (separate AC clamp)</b>		● Backup port						
<b>Battery backup light (backup connection inverter, i.n. transfer switch)</b>		● Backup port						
<b>Full battery backup (automatic transfer switch)</b>		○						
<b>Off-grid battery recharge</b>		●						
<b>System informations</b>		3-phase DC coupled storage system; BT series for AC connection						
<b>Solutions for larger storage system configurations</b>		up to 10 systems in parallel operation (only hybrid) (SEC1000S box necessary, Germany + Austria: all EPS outlets active - not synchronized) *** BT series via AC coupling to matching PV inverter						

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Inverter  
manufacturer



<b>Storage inverter type</b>		SUN2000-2 / 3 / 3.68 / 4 / 4.6 / 5* / 6* KT-L1	SUN2000-3 / 4 / 5 / 6 / 8 / 10 KTL-M1	Blueplanet Hybrid 10.0 TL3	
<b>Max. PV system size (kWp)</b>		DC: 3.0 to 9.0 AC: no limitations	DC: 4.5 to 15.0 AC: no limitations	DC: 12.0	
<b>AC phases</b>	1	●	○	○	
	3	○	●	●	
<b>Surge Protection Device</b>	AC	type 2		-	
	DC	type 2		-	
<b>Bat.-coupling</b>	AC (Bat.-Inv)	●	●	○	
	DC (Hybrid)	●	●	●	
<b>Bat. charging via separate PV inverter (AC-coupling)</b>		●	●	○	
<b>Manufacturer storage</b>					
<b>Storage type</b>		LUNA2000-5 / 10 / 15-50		B-Box HVS 5.1 to 10.2	B-Box HVM 11 to 22.1
<b>Max. power charge / discharge (kW)</b>		2.2 to 5.0*	5.0 / 10.0	5.1 to 10.2	5.1 to 10.2
<b>Usable capacity (kWh)</b>		5.0 to 30.0		5.1 to 30.6	11.0 to 66.3
<b>Expandable / Time window from commissioning</b>		unlimited		unlimited	
<b>Emergency power (separate AC clamp)</b>		● 1-phase with Huawei Backup Box-B0	● 1-phase with Huawei Backup Box-B1	○	
<b>Battery backup light (backup connection inverter, i.n. transfer switch)</b>		● 1-phase with Huawei Backup Box-B0	● 1-phase with Huawei Backup Box-B1	○	
<b>Full battery backup (automatic transfer switch)</b>		○	○	● with Kaco Hy-Switch Backup Box	
<b>Off-grid battery recharge</b>		●	●	●	
<b>System informations</b>		1-phase DC coupled storage system; AC coupling additionally possible	3-phase DC coupled storage system; AC coupling additionally possible	3-phase DC coupled storage system; off-grid-mode possible through optional activation	
<b>Solutions for larger storage system configurations</b>		1-phase hybrid device with additional PV inverter via AC coupling	up to 3 systems in parallel operation ***, (for 1-phase emergency back up function, Backup Box-B1 required, only active on master device) with additional PV inverter via AC coupling	no coupling with second inverter possible, no manufacturer monitoring portal	

**Inverter  
manufacturer**


<b>Storage inverter type</b>		Plenticore Plus 3.0 / 4.2 / 5.5 / 7.0 / 8.5 / 10 (Plenticore Plus 3.0 with BYD HVM only 11.0)			Plenticore BI 5.5 / 26 and 10 / 26			
<b>Max. PV system size (kWp)</b>		DC: 4.5 to 15.0 AC: no limitations			AC: no limitations			
<b>AC phases</b>	1	○			○			
	3	●			●			
<b>Surge Protection Device</b>	AC	-			-			
	DC	-			-			
<b>Bat.-coupling</b>	AC (Bat.-Inv)	○			●			
	DC (Hybrid)	●			○			
<b>Bat. charging via separate PV inverter (AC-coupling)</b>		●			●			
<b>Manufacturer storage</b>		<b>-AXITEC</b>				<b>-AXITEC</b>		
<b>Storage type</b>		AXIstorage Li SH (Energypack)	B-Box HVS 5.1 to 12.8	B-Box HVM 11.0 to 22.1	RESU FLEX 8.6 to 17.2	AXIstorage Li SH (Energypack)	B-Box HVS 5.1 to 12.8	B-Box HVM 13.8 to 22.1
<b>Max. power charge / discharge (kW)</b>		2.7 to 4.0	2.7 to 6.5	2.6 to 5.3	4.3 to 8.5	2.7 to 4.0	5.1 to 10.0	6.6 to 10.0
<b>Usable capacity (kWh)</b>		7.5 to 15.0	5.1 to 38.4	11.0 to 66.3	8.6 to 34.4	12.5 to 15.0	5.1 to 38.4	13.8 to 66.3
<b>Expandable / Time window from commissioning</b>		unlimited			expected unlimited	unlimited		
<b>Emergency power (separate AC clamp)</b>		○			○			
<b>Battery backup light (backup connection inverter, i.n. transfer switch)</b>		○			○			
<b>Full battery backup (automatic transfer switch)</b>		○			○			
<b>Off-grid battery recharge</b>		○			○			
<b>System informations</b>		3-phase DC coupled storage system; Plenticore BI AC coupled			3-phase AC coupled storage system			
<b>Solutions for larger storage system configurations</b>		3-phase hybrid device with additional PV inverter via AC coupling			3-phase battery inverter with high charging power and PV inverter via AC coupling			

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Inverter  
manufacturer

**KOSTAL**  
Solar Electric

**LG**  
Life's Good

<b>Storage inverter type</b>		Piko MP Plus 1.5-1 / 2.0-1 / 2.5-1		Piko MP Plus 3.0-2 / 3.6-2 / 4.6-2 / 5.0-2*		LG ESS Home 8.0 / 10.0
<b>Max. PV system size (kWp)</b>		DC: 2.3 to 3.75 AC: no limitations		DC: 4.5 to 6.9 AC: no limitations		DC: 12.0 / 13.5
<b>AC phases</b>	1	●		●		○
	3	○		○		●
<b>Surge Protection Device</b>	AC	-		-		-
	DC	-		-		-
<b>Bat.-coupling</b>	AC (Bat.-Inv)	●		○		○
	DC (Hybrid)	●		●		●
<b>Bat. charging via separate PV inverter (AC-coupling)</b>		●		●		●
<b>Manufacturer storage</b>						
<b>Storage type</b>		BYD HVS 5.1 to 7.7	BYD HVM 8.3 to 11.0	B-Box HVS 5.1 to 12.8	B-Box HVM 8.3 to 22.1	LG HBP 11H / 15H
<b>Max. power charge / discharge (kW)</b>		1.5 to 2.5	1.5 to 2.5	2.7 to 4.6	2.0 to 4.6	5.0 to 7.0
<b>Usable capacity (kWh)</b>		5.1 to 7.7	8.3 to 11.0	5.1 to 12.8	8.3 to 22.1	10.6 to 28.4
<b>Expandable / Time window from commissioning</b>		unlimited		unlimited		expected 1 year, up to 2 units
<b>Emergency power (separate AC clamp)</b>		○		○		○
<b>Battery backup light (backup connection inverter, i.n. transfer switch)</b>		○		○		○
<b>Full battery backup (automatic transfer switch)</b>		○		○		● with Enwitec Backup Box
<b>Off-grid battery recharge</b>		○		○		●
<b>System informations</b>		1-phase DC coupled storage system		1-phase DC coupled storage system		3-phase DC coupled storage system; inverter with 3 MPP Tracker
<b>Solutions for larger storage system configurations</b>		1-phase hybrid device with additional PV inverter via AC coupling		1-phase hybrid device with additional PV inverter via AC coupling		Stand-alone System; no expansion via AC coupling possible

**Inverter  
manufacturer**


<b>Storage inverter type</b>		Sunny Island 4.4M / 6.0H / 8.0H			Sunny Island 4.4M / 6.0H	
<b>Max. PV system size (kWp)</b>		AC: no limitations**				
<b>AC phases</b>	1	●			●	
	3	●			○	
<b>Surge Protection Device</b>	AC	-			-	
	DC	-			-	
<b>Bat.-coupling</b>	AC (Bat.-Inv)	●			●	
	DC (Hybrid)	○			○	
<b>Bat. charging via separate PV inverter (AC-coupling)</b>		●			●	
<b>Manufacturer storage</b>		<b>-AXITEC</b>				
<b>Storage type</b>		AXIstorage Li 8S	LVS 4.0 to 24.0	B-Box LVL 15.4	RESU 6.5	RESU 10 to RESU 12
<b>Max. power charge / discharge (kW)</b>		3.3 to 18.0	3.3 to 18.0	3.3 to 18.0	3.3 to 5.0*	3.3 to 5.0*
<b>Usable capacity (kWh)</b>		7.1 to 85.2	4.0 to 24.0	15.4 to 138,6	5.9 to 11.8	8.8 to 23.4
<b>Expandable / Time window from commissioning</b>		up to 6 months	unlimited		unlimited, up to 2 units	unlimited, up to 2 units
<b>Emergency power (separate AC clamp)</b>		○			○	○
<b>Battery backup light (backup connection inverter, i.n. transfer switch)</b>		○			○	○
<b>Full battery backup (automatic transfer switch)</b>		● with Enwitec Backup Box (1- / 3-phase, 1-phase with phase coupling)			○	● with Enwitec Backup Box (1-phase)
<b>Off-grid battery recharge</b>		●**			○	●**
<b>System informations</b>		1- / 3-phase AC coupled storage system; off-grid capable			1-phase AC coupled storage system	
<b>Solutions for larger storage system configurations</b>		1- / 3-phase AC coupled storage system with matching PV inverter			1-phase AC coupled storage system with matching PV inverter	

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**Inverter  
manufacturer**


<b>Storage inverter type</b>		Sunny Boy Storage 2.5 / 3.7 / 5.0 / 6.0*			Sunny Tripower 5.0 / 6.0 / 8.0 / 10.0 Smart Energy	
<b>Max. PV system size (kWp)</b>		AC: no limitations**			DC: 7.5 to 15.0 AC: no limitations	
<b>AC phases</b>	1	●			○	
	3	○			●	
<b>Surge Protection Device</b>	AC	-			type 2	
	DC	-			type 2	
<b>Bat.-coupling</b>	AC (Bat.-Inv)	●			○	
	DC (Hybrid)	○			●	
<b>Bat. charging via separate PV inverter (AC-coupling)</b>		●			●	
<b>Manufacturer storage</b>		<b>-AXITEC</b>				
<b>Storage type</b>		AXIstorage Li SH	B-Box HVS 5.1 to 10.2	B-Box HVM 8.3 to 22.1 (except SBS 2.5)	RESU 10H + 16H Prime (except SBS 2.5)	B-Box HVS 5.1 to 12.8 *** B-Box HVM 11 to 22.1 ***
<b>Max. power charge / discharge (kW)</b>		2.5 to 6.0*	2.5 to 6.0*	3.7 to 6.0*	3.7 to 6.0*	5.1 to 10.6 10.2 to 10.6
<b>Usable capacity (kWh)</b>		7.5 to 45.0	5.1 to 30.6	8.3 to 66.3	9.6 to 32.0	5.1 to 12.8 11.0 to 22.1
<b>Expandable / Time window from commissioning</b>		unlimited	unlimited		unlimited	unlimited
<b>Emergency power (separate AC clamp)</b>		● (except SBS 2.5)			○	
<b>Battery backup light (backup connection inverter, i.n. transfer switch)</b>		○			● Backup port	
<b>Full battery backup (automatic transfer switch)</b>		● with Enwitec Backup Box (1-phase with phase coupling; except SBS 2.5)			○	
<b>Off-grid battery recharge</b>		●**			●	
<b>System informations</b>		1-phase AC coupled storage system; 3 battery inputs on the inverter (except SBS 2.5)			3-phase DC coupled storage system	
<b>Solutions for larger storage system configurations</b>		1-phase AC coupled storage system with matching PV inverter			3-phase hybrid device with additional PV inverter via AC coupling	

**Inverter  
manufacturer**


<b>Storage inverter type</b>		HD-WAVE SetApp SE 2200H / 3000 / 3500H / 3680H / 4000H / 5000H* / 6000H*	HD-WAVE StorEdge RWS SE 2200H / 3000 / 3500H / 3680H / 4000H / 5000H* / 6000H*
<b>Max. PV system size (kWp)</b>		DC: 3.4 to 7.75 AC: no limitations	DC: 3.4 to 7.8 AC: no limitations
<b>AC phases</b>	1	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	3	<input type="radio"/>	<input type="radio"/>
<b>Surge Protection Device</b>	AC	-	-
	DC	-	-
<b>Bat.-coupling</b>	AC (Bat.-Inv)	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	DC (Hybrid)	<input checked="" type="radio"/>	<input checked="" type="radio"/>
<b>Bat. charging via separate PV inverter (AC-coupling)</b>		<input checked="" type="radio"/>	<input checked="" type="radio"/>
<b>Manufacturer storage</b>			
<b>Storage type</b>		SE Energy Bank	SE Energy Bank RESU 10H + 16H Prime
<b>Max. power charge / discharge (kW)</b>		5.0	5.0 3.5 to 6.0*
<b>Usable capacity (kWh)</b>		9.7 to 29.1	9.7 to 29.1 9.6 to 16.0
<b>Expandable / Time window from commissioning</b>		unlimited	unlimited <input type="radio"/>
<b>Emergency power (separate AC clamp)</b>		<input type="radio"/>	<input type="radio"/>
<b>Battery backup light (backup connection inverter, i.n. transfer switch)</b>		<input type="radio"/>	<input type="radio"/>
<b>Full battery backup (automatic transfer switch)</b>		<input type="radio"/>	<input type="radio"/>
<b>Off-grid battery recharge</b>		<input type="radio"/>	<input type="radio"/>
<b>System informations</b>		1-phase DC or AC coupled storage system	1-phase DC or AC coupled storage system
<b>Solutions for larger storage system configurations</b>		1-phase hybrid device with additional PV inverter via AC coupling	1-phase hybrid device with additional PV inverter via AC coupling

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Inverter  
manufacturer

**solar**edge

<b>Storage inverter type</b>		RWS StorEdge Hybrid 5/7/8/10		RWB48 Home Hub Inverter 5 / 8 / 10
<b>Max. PV system size (kWp)</b>		DC: 6.5 to 13.5 AC: no limitations		DC: 10.0 to 15.0 AC: no limitations
<b>AC phases</b>	1	<input type="radio"/>		<input type="radio"/>
	3	<input checked="" type="radio"/>		<input checked="" type="radio"/>
<b>Surge Protection Device</b>	AC	-		-
	DC	-		-
<b>Bat.-coupling</b>	AC (Bat.-Inv)	<input checked="" type="radio"/>		announced
	DC (Hybrid)	<input checked="" type="radio"/>		<input checked="" type="radio"/>
<b>Bat. charging via separate PV inverter (AC-coupling)</b>		<input checked="" type="radio"/>		<input checked="" type="radio"/>
<b>Manufacturer storage</b>				<b>solar</b> edge
<b>Storage type</b>		LVS 4.0 to 24.0	RESU 6.5 to RESU 12	Home Battery
<b>Max. power charge / discharge (kW)</b>		per 3.3 to 5.0	per 4.2 to 5.0	2.8 to 5.0 / 4.0 to 5.0
<b>Usable capacity (kWh)</b>		4 to 24	5.9 to 23.4	4.6 to 23.0
<b>Expandable / Time window from commissioning</b>		unlimited, 1 tower only	unlimited, up to 2 units	unlimited
<b>Emergency power (separate AC clamp)</b>		<input type="radio"/>		<input type="radio"/>
<b>Battery backup light (backup connection inverter, i.n. transfer switch)</b>		<input type="radio"/>		<input type="radio"/>
<b>Full battery backup (automatic transfer switch)</b>		<input type="radio"/>		<input checked="" type="radio"/> with Home Backup Interface
<b>Off-grid battery recharge</b>		<input type="radio"/>		<input checked="" type="radio"/>
<b>System informations</b>		3-phase DC or AC coupled storage system		3-phase DC or AC coupled storage system
<b>Solutions for larger storage system configurations</b>		up to 3 systems in parallel operation***, with additional PV inverter via AC coupling		3-phase hybrid device with additional PV inverter via AC coupling

**Inverter  
manufacturer**


<b>Storage inverter type</b>		X1-HYBRID G4 (Version D) 3.0-D / 3.7-D / 5.0-D*		X1-FIT-E Retrofit 3.7 / 5.0*		X3-HYBRID G4 (Version D) 5.0-D / 6.0-D / 8.0-D / 10.0-D / 12.0-D / 15.0-D	
<b>Max. PV system size (kWp)</b>		DC: 4.5 to 7.5 AC: no limitations		AC: no limitations		DC: 8.0 to 18.0 AC: no limitations	
<b>AC phases</b>	1	●		●		○	
	3	○		○		●	
<b>Surge Protection Device</b>	AC	-		-		-	
	DC	-		-		-	
<b>Bat.-coupling</b>	AC (Bat.-Inv)	○		●		○	
	DC (Hybrid)	●		○		●	
<b>Bat. charging via separate PV inverter (AC-coupling)</b>		●		●		●	
<b>Manufacturer storage</b>							
<b>Storage type</b>		T-BAT H 5.8	T-BAT H 3.0 / 6.0 / 9.0 / 12.0	T-BAT H 5.8	T-BAT H 3.0 / 6.0 / 9.0 / 12.0	T-BAT H 5.8	T-BAT H 6.0 / 9.0 / 12.0
<b>Max. power charge / discharge (kW)</b>		3.0 to 5.0*	3.0 to 5.0*	2.3 to 6.9*	3.0 to 5.0*	6.9 to 13.8	6.2 to 12.3
<b>Usable capacity (kWh)</b>		5.2 to 15.6	2.79 to 11.16	5.2 to 15.6	2.79 to 11.16	10.4 to 20.7	5.58 to 11.16
<b>Expandable / Time window from commissioning</b>		up to 1 year	up to 1 year	up to 1 year	up to 1 year	up to 1 year	up to 1 year
<b>Emergency power (separate AC clamp)</b>		● with Solax X1 EPS Backup Box		●		● with Solax X3 EPS Backup Box	
<b>Battery backup light (backup connection inverter, i.n. transfer switch)</b>		● with Solax X1 EPS Backup Box		●		● with Solax X3 EPS Backup Box	
<b>Full battery backup (automatic transfer switch)</b>		○		○		● with Solax X3 EPS Parallel Box	
<b>Off-grid battery recharge</b>		●		○		●	
<b>System informations</b>		1-phase DC coupled storage system		1-phase AC coupled storage system		3-phase DC coupled storage system	
<b>Solutions for larger storage system configurations</b>		1-phase hybrid device with additional PV inverter via AC coupling		1-phase AC coupled storage system with matching PV inverter		up to 5 systems in parallel operation (X3-EPS Parallel Box PS required for backup operation, only same inverter power classes and battery sizes, EPS ports synchronized)	

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Inverter  
manufacturer



**SUNGROW**  
Clean power for all

<b>Storage inverter type</b>		X3-HYBRID G4 (Version M) 6.0-M / 8.0-M / 10.0-M / 12.0-M / 15.0-M	X3-FIT-E Retrofit 8.0 / 10.0*		SH 5.0 / 6.0 / 8.0 / 10.0 RT
<b>Max. PV system size (kWp)</b>		DC: 10,0 to 18,0 AC: no limitations	AC: no limitations		DC: 5.0 to 15.0 / AC: no limitations
<b>AC phases</b>	1	○	○		○
	3	●	●		●
<b>Surge Protection Device</b>	AC	-	-		type 2
	DC	-	-		type 2
<b>Bat.-coupling</b>	AC (Bat.-Inv)	○	●		○
	DC (Hybrid)	●	○		●
<b>Bat. charging via separate PV inverter (AC-coupling)</b>		●	●		●
<b>Manufacturer storage</b>					
<b>Storage type</b>		T-BAT H 6.0 / 9.0 / 12.0	T-BAT H 5.8	T-BAT H 6.0 / 9.0 / 12.0	B-Box HVS 5.1 to 12.8 B-Box HVM 11.0 to 22.1
<b>Max. power charge / discharge (kW)</b>		6.2 to 12.3	5.8 to 11.5	6.2 to 12.3	per 6.0 to 10.6 per 6.0 to 10.6
<b>Usable capacity (kWh)</b>		5.58 to 11.16	10.4 to 20.7	5.58 to 11.16	5.1 to 38.4 11.0 to 66.3
<b>Expandable / Time window from commissioning</b>		up to 1 year	up to 1 year	up to 1 year	unlimited
<b>Emergency power (separate AC clamp)</b>		○	●		● Backup port (can only be used separately per device during parallel operation)
<b>Battery backup light (backup connection inverter, i.n. transfer switch)</b>		○	●		● Backup port (can only be used separately per device during parallel operation)
<b>Full battery backup (automatic transfer switch)</b>		● with Solax X3 Mate Box	○		○
<b>Off-grid battery recharge</b>		● with Solax X3 Mate Box	○		●
<b>System informations</b>		3-phase DC coupled storage system, use only with X3-Matebox	3-phase AC coupled storage system		3-phase DC coupled storage system
<b>Solutions for larger storage system configurations</b>		3-phase hybrid device, Stand-alone system with 3-phase Backup power function via X3 Matebox	3-phase AC coupled storage system with matching PV inverter		up to 5 systems in parallel operation (note requirements for FRE connection and NA protection in Germany, only same inverter power classes possible); with additional PV inverter via AC coupling

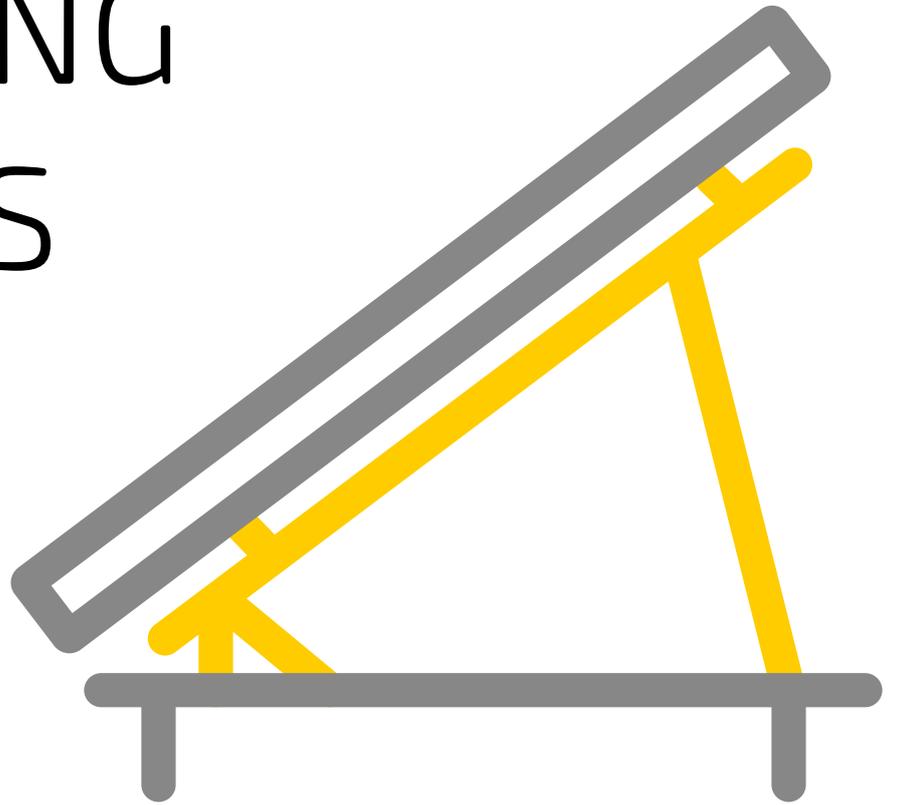
<b>Storage inverter type</b>		SH 5.0 / 6.0 / 8.0 / 10.0 RT			Pulse neo 6	Element Backup 6 / 12 / 18
<b>Max. PV system size (kWp)</b>		DC: 5.0 to 15.0 / AC: no limitations			AC: no limitations	
<b>AC phases</b>	1	<input type="radio"/>			<input checked="" type="radio"/>	<input type="radio"/>
	3	<input checked="" type="radio"/>			<input type="radio"/>	<input checked="" type="radio"/>
<b>Surge Protection Device</b>	AC	type 2			-	-
	DC	type 2			-	-
<b>Bat.-coupling</b>	AC (Bat.-Inv)	<input type="radio"/>			<input checked="" type="radio"/>	
	DC (Hybrid)	<input checked="" type="radio"/>			<input type="radio"/>	
<b>Bat. charging via separate PV inverter (AC-coupling)</b>		<input checked="" type="radio"/>			<input checked="" type="radio"/>	
<b>Manufacturer storage</b>		 PYLONTECH	 SUNGROW Clean power for all	 -AXITEC		 VARTA
<b>Storage type</b>		96V Force-H2 7.0 / 10.5 / 14.0	SBR 096 / 128 / 160 / 192 / 224 / 256	AXIstorage Li SV1 14.2 to 14.9	AXIstorage Li SV2 7.1 to 14.2	Pulse neo      Element
<b>Max. power charge / discharge (kW)</b>		per 3.6 to 7.1	per 6.0 to 10.6	5.7 to 10.1	3.5 to 7.1	2.5 / 2.3      2.2 to 4.0 / 1.8 to 4.0
<b>Usable capacity (kWh)</b>		6.4 to 12.8	9.6 to 25.6	13.5 to 23.6	6.7 to 13.5	5.9      5.9 / 11.7 / 17.7
<b>Expandable / Time window from commissioning</b>		up to 2 years	unlimited	up to 2 years		-      unlimited
<b>Emergency power (separate AC clamp)</b>		<input checked="" type="radio"/> Backup port (can only be used separately per device during parallel operation)			<input type="radio"/>	<input checked="" type="radio"/> backup port/box (only active on master device)
<b>Battery backup light (backup connection inverter, i.n. transfer switch)</b>		<input checked="" type="radio"/> Backup port (can only be used separately per device during parallel operation)			<input type="radio"/>	<input checked="" type="radio"/> backup port/box (only active on master device)
<b>Full battery backup (automatic transfer switch)</b>		<input type="radio"/>			<input type="radio"/>	<input type="radio"/>
<b>Off-grid battery recharge</b>		<input checked="" type="radio"/>			<input type="radio"/>	<input type="radio"/>
<b>System informations</b>		3-phase DC coupled storage system			1-phase AC coupled storage system	3-phase AC coupled storage system
<b>Solutions for larger storage system configurations</b>		up to 5 systems in parallel operation (note requirements for FRE connection and NA protection in Germany, only same inverter power classes possible); with additional PV inverter via AC coupling			AC coupled storage system, 1-/3-phase, ideal for storage retrofitting in existing plants, cascable up to 5 units with Varta link	

Explanation of The specifications		Description
<b>Storage inverter type</b>		Name inverter series and power classes
<b>Max. PV system size (kWp)</b>		DC System size according to manufacturer's specifications *
<b>AC phases</b>	1	1-phase grid connection
	3	3-phase grid connection
<b>Surge Protection Device</b>	AC	Specification of integrated overvoltage protection, if applicable also as an additional option
	DC	
<b>Bat.-coupling</b>	AC (Bat.-Inv)	Definition of battery coupling via AC: Inverter is designed as pure AC-coupled device (e.g. SMA Sunny Island) or can also be used as hybrid inverter without connection of PV modules as bat inverter.
	DC (Hybrid)	Definition of battery coupling via DC: The inverter is designed as a hybrid device and can charge the battery via DC coupling from the directly connected PV modules.
<b>Bat. charging via separate PV inverter (AC-coupling)</b>		Use of a second inverter (same or different manufacturer) for charging the battery storage via AC coupling
<b>Manufacturer storage</b>		Manufacturer storage
<b>Storage type</b>		Storage type
<b>Max. power charge / discharge (kW)</b>		maximum charge / discharge power in the respective unit combination *
<b>Usable capacity (kWh)</b>		Usable capacity according to storage manufacturer *
<b>Expandable / Time window from commissioning</b>		Possibility of a battery expansion as well as the time window for this from the time of commissioning
<b>Emergency power (separate AC clamp)</b>		Definition: Separate clamp at inverter for external socket(s), which is fed from battery and if possible by solar power.
<b>Battery backup light (backup connection inverter, i.n. transfer switch)</b>		Definition: direct supply of few defined circuits via backup connection at the inverter, if necessary also with switching by backup box (no complete house load)
<b>Full battery backup (automatic transfer switch)</b>		Definition: by means of automatic transfer switch in central main line (according to local regulations) supply of all/defined circuits takes place
<b>Off-grid battery recharge</b>		Recharge option in case of grid failure
<b>System informations</b>		Additional system information
<b>Solutions for larger storage system configurations</b>		Details regarding cascading and special conditions and properties for larger configurations

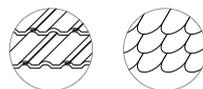
\* The respective columns for the unit series contain different performance classes, therefore all information refers to the smallest and largest unit in each case. Detailed information can be found in the data sheet.

## OVERVIEW

# MOUNTING SYSTEMS



RESIDENTIAL  
COMMERCIAL  
INDUSTRY

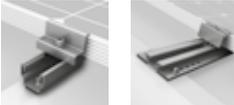


### Tiled roof

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

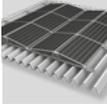


### Trapezoidal roof (no isolated trapezoidal roof)

<b>Mounting systems</b>	 SpeedRail	 MultiRail, MiniRail	 MiniFive (based on MiniRail)
<b>System structure / Rail concept</b>	roof parallel / single or double layered	roof parallel / short rail system	
<b>Rail type</b>	SpeedRail 22	MultiRail	MiniRail
<b>Rail length (m)</b>	2,25 3,30 4,40 5,50	0,10	0,25
<b>Roof fixing</b>	with speed clip and thread-forming drilling screw	thread-forming drilling screw	
<b>Fixing points</b>	metal roofing	metal roofing	
<b>Module clamps</b>	for 30 - 50 mm frame height in black or silver		MiniClamp for 30 - 50 mm frame height in black or silver
<b>Notes</b>	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)

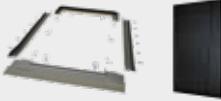
<b>Mounting systems</b>	 <p>Solar fastener with calotte and SingleRail, SolidRail, Insertion System</p>		 <p>Dome Classic on trapezoid</p>
<b>System structure / Rail concept</b>	<p>roof parallel / single or double layer with continuous rails</p>		<p>10° flat roof system with roof fixing</p>
<b>Rail type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



### Metal seam roof



### In-roof (Viridian)

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

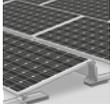
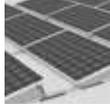


### Corrugated fibre cement panels (Eternit)

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

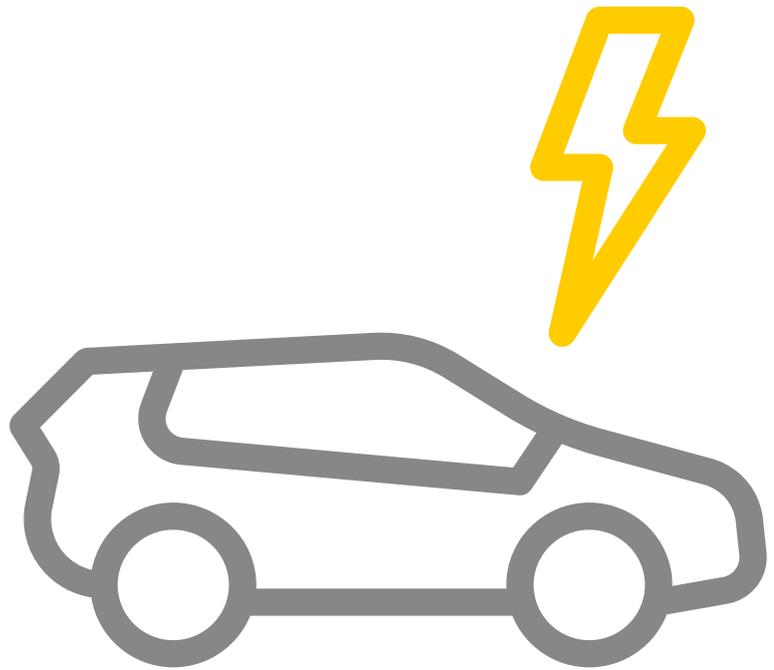


### Flat roof

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

OVERVIEW

# EMOBILITY PV CHARGING SOLUTIONS



PV CHARGING  
SOLUTIONS  
**RESIDENTIAL**  
COMMERCIAL

Manufacturer

**-AXITEC****BRC**  
SOLAR

<b>Product series</b>		AXIbox	Opticharge
<b>Product name</b>		AXIbox 11K	Opticharge 11
<b>Wallbox / Charging station</b>		wallbox	wallbox
<b>Cable / Socket</b>		Type 2 cable	Type 2 cable
<b>Suitable for</b>	Private	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	Half-Public	<input type="radio"/>	<input type="radio"/>
	Public	<input type="radio"/>	<input type="radio"/>
<b>Max. Charging power (kW)</b>		11 kW	11 kW
<b>Grid connection</b>		3-phase 400V / 16A, 50Hz	3-phase 400V / 16A, 50Hz
<b>Special features / accessories</b>	<b>DC residual current detection (RCD)</b>	DC residual current detection > 6mA (on-site Type A residual current circuit breaker required)	DC residual current detection > 6mA (on-site Type A residual current circuit breaker required)
	RFID	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	Key switch	<input type="radio"/>	<input type="radio"/>
	Intelligent energy management (connection to PV)	<input type="radio"/>	<input type="radio"/>
<b>Dynamic load management</b>		<input type="radio"/>	<input type="radio"/>
<b>Calibration law compliant / Accounting system</b>		<input type="radio"/> / <input type="radio"/>	<input type="radio"/> / <input type="radio"/>
<b>Features</b>		Wifi connection, App	LAN / Wifi connection, App

Manufacturer

eassee®

EVBOX

<b>Product series</b>		EV Charger		ELVI	
<b>Product name</b>		Home	Charge	ELVI V2 Black 11kW	ELVI V2 Black 22kW
<b>Wallbox / Charging station</b>		wallbox		wallbox	
<b>Cable / Socket</b>		Type 2 socket		Type 2 socket	
<b>Suitable for</b>	Private	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	Half-Public	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Public	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Max. Charging power (kW)</b>		22 kW		11 kW	22 kW
<b>Grid connection</b>		3-phase 400V / 32A, 50Hz		3-phase 400V / 16A, 50Hz	3-phase 400V / 32A, 50Hz
<b>Special features / accessories</b>	<b>DC residual current detection (RCD)</b>	integrated residual current circuit breaker Type A and DC residual current detection > 6mA		DC residual current detection > 6mA (on site integrated residual current circuit breaker Type A required)	
	RFID	<input checked="" type="radio"/>		<input checked="" type="radio"/>	
	Key switch	<input type="radio"/>		<input type="radio"/>	
	<b>Intelligent energy management (connection to PV)</b>	<input checked="" type="radio"/> with Eassee Equalizer or Solar Manager and compatible Smart Meter		<input checked="" type="radio"/> with EVBox Smart Charging	
<b>Dynamic load management</b>		<input checked="" type="radio"/> with Eassee Equalizer		<input checked="" type="radio"/> with EVBox Smart Charging Kit	
<b>Calibration law compliant / Accounting system</b>		<input type="radio"/> / <input type="radio"/>		<input type="radio"/> / <input type="radio"/>	
<b>Features</b>		autom. 1-/3-phase charge; Wifi with eSim, App		Wifi connection, App	

## Manufacturer



<b>Product series</b>		Wattpilot		
<b>Product name</b>		Wattpilot Go 11 J	Wattpilot Go 22 J	Wattpilot Home 11 J
<b>Wallbox / Charging station</b>		wallbox	wallbox	wallbox
<b>Cable / Socket</b>		Type 2 socket		
<b>Suitable for</b>	Private	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	Half-Public	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Public	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Max. Charging power (kW)</b>		11 kW	22 kW	11 kW
<b>Grid connection</b>		1-phase 230V / 3-phase 400V, 50 Hz (via Adapter)		1-phase 230V / 3-phase 400V, 50 Hz (fixed connection)
<b>Special features / accessories</b>	<b>DC residual current detection (RCD)</b>	integrated residual current circuit breaker Type A and DC residual current detection > 6mA		
	<b>RFID</b>		<input checked="" type="radio"/>	
	<b>Key switch</b>		<input type="radio"/>	
	<b>Intelligent energy management (connection to PV)</b>		<input checked="" type="radio"/> with Fronius	
<b>Dynamic load management</b>			<input type="radio"/>	
<b>Calibration law compliant / Accounting system</b>			<input type="radio"/> / <input type="radio"/>	
<b>Features</b>		mobile solution with variable AC plug and App connection		close networking with storage system, separate App, Eco / Next-Trip mode

Manufacturer

**HARDY BARTH**  
 emobilität

<b>Product series</b>		cPμ2	cPH2			cPP1		
<b>Product name</b>		cPμ2 - Pro	cPH2 - 1T11	cPH2 - 1T22	cPH2 - 2T22	cPP1 - 2T22	cPP1 - 2T44	cPP1 - 4T44
<b>Wallbox / Charging station</b>		wallbox	wallbox			charging station		
<b>Cable / Socket</b>		Type 2 cable	both possible			Type 2 socket		
<b>Suitable for</b>	Private	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Half-Public	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	Public	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
<b>Max. Charging power (kW)</b>		11 kW	11 kW	22 kW	22 kW; 11 kW / 11 kW	2 x 11 kW / 1 x 22 kW	2 x 22 kW	4 x 11 kW / 2 x 22 kW
<b>Grid connection</b>		3-phase 400V / 16A, 50Hz	3-phase 230V / 16A, 50Hz	3-phase 400V / 32A, 50Hz	3-phase 400V / 32A, 50Hz	3-phase 400V / 32A, 50Hz	3-phase 400V / 63A, 50Hz	3-phase 400V / 63A, 50Hz
<b>Special features / accessories</b>	<b>DC residual current detection (RCD)</b>	DC residual current detection > 6mA (on-site residual current circuit breaker Type A required)	DC residual current detection > 6mA (on-site Type A residual current circuit breaker required)			DC residual current detection > 6mA, residual current circuit breaker Type A installed		
	<b>RFID</b>	<input type="radio"/>	optional			<input checked="" type="radio"/>		
	<b>Key switch</b>	<input type="radio"/>	optional			optional		
	<b>Intelligent energy management (connection to PV)</b>	<input checked="" type="radio"/> with Smart Meter eCB1-PV (compatible with Fronius, SMA & KOSTAL)						
<b>Dynamic load management</b>		<input checked="" type="radio"/> with eCB1-PV, (measuring point +) at the grid connection						
<b>Calibration law compliant / Accounting system</b>		<input type="radio"/> / <input type="radio"/>						
<b>Features</b>		flexible application options thanks to own metering and load management	flexible application options thanks to own metering and load management			flexible application options thanks to own metering and load management		

Manufacturer

**KOSTAL**  
Solar Electric

 **MENNEKES®**

<b>Product series</b>		Enector	Amtron	
<b>Product name</b>		Enector AC Wallbox	Basic	
<b>Wallbox / Charging station</b>		wallbox	wallbox	
<b>Cable / Socket</b>		Type 2 cable	both possible	
<b>Suitable for</b>	Private	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	Half-Public	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Public	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Max. Charging power (kW)</b>		3.7 kW (1-phase); 11 kW (3-phase)	3,7 kW	22 kW
<b>Grid connection</b>		1-phase 230V / 16A, 50Hz, 3-phase 400V / 16A, 50Hz	1-phase 230V / 16A, 50Hz	3-phase 400V / 32A, 50Hz
<b>Special features / accessories</b>	<b>DC residual current detection (RCD)</b>	DC residual current detection > 6mA, residual current circuit breaker Type A installed	integrated residual current circuit breaker Type B (all-current sensitive)	
	RFID	<input type="radio"/>	<input type="radio"/>	
	Key switch	<input type="radio"/>	<input checked="" type="radio"/>	
	<b>Intelligent energy management (connection to PV)</b>	<input checked="" type="radio"/> with Kostal KSEM and activation code (chargeable)	<input type="radio"/>	
<b>Dynamic load management</b>		<input type="radio"/>	<input type="radio"/>	
<b>Calibration law compliant / Accounting system</b>		<input type="radio"/> / <input type="radio"/>	<input checked="" type="radio"/> / <input type="radio"/>	
<b>Features</b>		Monitoring in the Kostal portal, 7.5 m charging cable	LED status display; multifunction button	

Manufacturer



<b>Product series</b>		Amtron				
<b>Product name</b>		Standard E	Start E	XTRA	Premium	
<b>Wallbox / Charging station</b>		wallbox	wallbox	wallbox	wallbox	
<b>Cable / Socket</b>		both possible	both possible	both possible	both possible	
<b>Suitable for</b>	<b>Private</b>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	<b>Half-Public</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	<b>Public</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Max. Charging power (kW)</b>		22 kW	22 kW	22 kW	3,7 kW	22 kW
<b>Grid connection</b>		3-phase 400V / 32A, 50Hz	3-phase 400V / 32A, 50Hz	3-phase 400V / 32A, 50Hz	1-phase 230V / 16A, 50Hz	3-phase 400V / 32A, 50Hz
<b>Special features / accessories</b>	<b>DC residual current detection (RCD)</b>	on site	on site	integrated residual current circuit breaker Type B (all-current sensitive)		
	<b>RFID</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	<b>Key switch</b>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<b>Intelligent energy management (connection to PV)</b>	<input type="radio"/>	<input type="radio"/>	with SMA; dynamic, via SEMP protocol		
<b>Dynamic load management</b>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		
<b>Calibration law compliant / Accounting system</b>		<input type="radio"/> / <input type="radio"/>	<input type="radio"/> / <input type="radio"/>	<input checked="" type="radio"/> / <input type="radio"/>		
<b>Features</b>		LED status display, button with reset function	LED status display; stop button	Charge App, company car billing; local monitoring via eMobility gateway		

<b>Product series</b>		Amtron				
<b>Product name</b>		Compact 2.0s	Compact C2	Professional	Professional +	Professional + PnC
<b>Wallbox / Charging station</b>		wallbox	wallbox	wallbox		
<b>Cable / Socket</b>		Type 2 cable	Type 2 cable	both possible		
<b>Suitable for</b>	Private	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	Half-Public	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	Public	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Max. Charging power (kW)</b>		11 kW / 22 kW	3.7 kW / 11 kW	22 kW		
<b>Grid connection</b>		1-/3-phase 230V/400V / 16-32A, 50Hz	1-/3-phase 230V/400V / 16A, 50Hz	3-phase 400V / 32A, 50Hz		
<b>Special features / accessories</b>	<b>DC residual current detection (RCD)</b>	Type A residual current circuit breaker must be installed on site; integrated DC residual current detection > 6mA	Type A residual current circuit breaker must be installed on site; integrated DC residual current detection > 6mA	integrated residual current circuit breaker Type A and DC residual current detection > 6mA (all-current sensitive)		
	RFID	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>		
	Key switch	<input type="radio"/>	<input checked="" type="radio"/> on site	<input type="radio"/>		
	Intelligent energy management (connection to PV)	<input checked="" type="radio"/>	<input type="radio"/>	software update to EEBUS from 2021	<input type="radio"/>	<input type="radio"/>
<b>Dynamic load management</b>		<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> with additional measuring point		
<b>Calibration law compliant / Accounting system</b>		<input type="radio"/> / <input type="radio"/>	<input type="radio"/> / <input type="radio"/>	<input checked="" type="radio"/> / <input type="radio"/> (from 2021 conforms to calibration law)		
<b>Features</b>		Sleep mode; 2-stage load management via switching contact	Sleep mode; 2-stage load management via switching contact	can be networked with up to 100 units; phase-accurate current measurement	integrated 3G / 4G modem; networkable with up to 100 units; phase-accurate current measurement	integrated 3G/4G modem; communication according to ISO 15118 incl. Plug and Charge (PnC); networkable with up to 100 units; phase-accurate current measurement

Manufacturer



<b>Product series</b>		Amedio			
<b>Product name</b>		Professional	Professional +	Professional PnC	Professional + PnC
<b>Wallbox / Charging station</b>		charging station			
<b>Cable / Socket</b>		Type 2 socket			
<b>Suitable for</b>	Private	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Half-Public	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	Public	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
<b>Max. Charging power (kW)</b>		2 x 22 kW	2 x 22 kW	2 x 22 kW	2 x 22 kW
<b>Grid connection</b>		3-phase 400V / 63A, 50Hz			
<b>Special features / accessories</b>	<b>DC residual current detection (RCD)</b>	2x integrated residual current circuit breaker Type A and DC residual current detection > 6mA; integrated surge protection Type 2; optional Type 1 + 2 available			
	<b>RFID</b>			<input checked="" type="radio"/>	
	<b>Key switch</b>			<input type="radio"/>	
	<b>Intelligent energy management (connection to PV)</b>			<input type="radio"/>	
<b>Dynamic load management</b>				<input checked="" type="radio"/>	with additional measuring point
<b>Calibration law compliant / Accounting system</b>				<input checked="" type="radio"/>	<input checked="" type="radio"/>
<b>Features</b>		can be networked with up to 100 units; phase-accurate current measurement	integrated 3G / 4G modem; can be networked with up to 100 units; phase-accurate current measurement	communication according to ISO 15118 incl. Plug and Charge (PnC); can be networked with up to 100 units; phase-accurate current measurement	integrated 3G / 4G modem; communication according to ISO 15118 incl. Plug and Charge (PnC); can be networked with up to 100 units; phase-accurate current measurement

## Manufacturer



<b>Product series</b>		SMA EV Charger	
<b>Product name</b>		SMA EV Charger 7,4	SMA EV Charger 22
<b>Wallbox / Charging station</b>		wallbox	
<b>Cable / Socket</b>		Type 2 cable	
<b>Suitable for</b>	Private	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	Half-Public	<input type="radio"/>	<input type="radio"/>
	Public	<input type="radio"/>	<input type="radio"/>
<b>Max. Charging power (kW)</b>		7.4 kW	22 kW
<b>Grid connection</b>		1-phase 230V / 32A, 50Hz	3-phase 400V / 32A, 50Hz
<b>Special features / accessories</b>	<b>DC residual current detection (RCD)</b>	DC residual current detection > 6mA (residual current circuit breaker Type A required on site)	
	RFID	<input type="radio"/>	
	Key switch	<input type="radio"/>	
	Intelligent energy management (connection to PV)	<input checked="" type="radio"/> with SMA	
<b>Dynamic load management</b>		<input checked="" type="radio"/> with SMA Home Manager	
<b>Calibration law compliant / Accounting system</b>		<input type="radio"/> / <input type="radio"/>	
<b>Features</b>		boost function, blackout protection, forecast based loading	

Manufacturer



<b>Product series</b>		Smart EV Charger	Home EV Charger
<b>Product name</b>		X3-EVC11K / -22K	SE-EVK22Cxx-01
<b>Wallbox / Charging station</b>		wallbox	wallbox
<b>Cable / Socket</b>		both possible	Type 2 cable
<b>Suitable for</b>	Private	<input checked="" type="radio"/>	<input checked="" type="radio"/>
	Half-Public	<input type="radio"/>	<input checked="" type="radio"/>
	Public	<input type="radio"/>	<input type="radio"/>
<b>Max. Charging power (kW)</b>		11 / 22 kW	22 kW
<b>Grid connection</b>		3-phase 400V / 16A / 32A, 50Hz	3-phase 400V / 32A, 50Hz
<b>Special features / accessories</b>	<b>DC residual current detection (RCD)</b>	integrated residual current circuit breaker Type A and DC residual current detection > 6mA	DC residual current detection > 6mA (on-site Type A residual current circuit breaker required)
	<b>RFID</b>	optional	optional
	<b>Key switch</b>	<input type="radio"/>	<input type="radio"/>
	<b>Intelligent energy management (connection to PV)</b>	<input checked="" type="radio"/> with Solax Smart Meter	<input checked="" type="radio"/> with SolarEdge
<b>Dynamic load management</b>		<input checked="" type="radio"/> with Solax Smart Meter	<input type="radio"/>
<b>Calibration law compliant / Accounting system</b>		<input type="radio"/> / <input type="radio"/>	<input type="radio"/> / <input type="radio"/>
<b>Features</b>		Wifi connection, App	purely AC-bound wallbox



A person wearing a high-visibility yellow-green vest is working on a large, blue, cylindrical metal structure. The structure has a vertical seam and some small text or markings. The background is slightly blurred, showing what appears to be an industrial or construction setting.

ANY  
QUESTIONS?

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