

# Because Power Comes from the Sun

Highly efficient solar power systems





From the first passive-house office building in Europe to energy self-sufficient production, we have shown for more than 35 years how innovative energy concepts can be successfully implemented for ecological building management.

## Power. Heat. Future

As first hour solar pioneers we have collaborated successfully with the sun since 1979. We are a one-stop systems supplier and offer solar power, solar heat, mounting systems and sustainable energy technology solutions.

### Our solar passion

In the same way that we operate as an enterprise, carefully chosen components optimise interaction in our system solutions.

More than 35 years of continuous development and production in Germany are the foundation of our Systems' high performance and efficiency. Many competitive awards testify to their performance, countless operating projects prove it daily.

### Progressing together

We supply solar power systems for private users, public facilities, commercial enterprises and investors. We deliver installations of outstanding quality at the best value-for-money ratio, aiming to contribute substantially to the energy transition.

#### WAGNER SOLAR GMBH

1979	founded in Marburg
2014	Wagner Solar GmbH, Kirchhain and Cölbe
65	employees
Partner	for solar power, solar heat, space-heating mounting systems and energy technology
Sales	through a network of professional installers



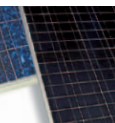
Entrepreneur of the year 2011



Outstanding responsibility

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# Shape the future - produce your own power

Rising energy prices, climate change, ecological persuasion or prestige - there are many drivers to switch to renewable energy. Tap into an unlimited source of energy and declare your independence from rising electricity costs.

## The changing energy market

Global electricity consumption has risen constantly since 1960. Fossil fuels are becoming scarcer and more expensive, and as reactor disasters clearly illustrated, power from nuclear fission has never been able to shed its safety deficits - and never will. The energy transition can only succeed by the continuous further expansion of renewable energies.

## Photovoltaic and power storage advantages

Solar power has proven successful for decades. Thanks to consistent research and development the systems are more affordable than ever and their improved efficiency makes them profitable without any government subsidies. Even without additional equipment you can use up to 30 percent of your generated solar power yourself. Unused electricity is fed into the grid.

## Solar power cheaper than domestic electricity

By now solar power has become cheaper than conventional household electricity obtained from the grid. At the time of writing a kilowatt-hour of solar energy will only cost you about 0.1 €.

## Halve your electricity bill

Using our **STOREit battery packages** allows you to even consume up to 70 percent of your own solar power, independent of the time of day, in the long run halving your electricity bill.





Energy self-sufficient collector factory - the entire Energy required for heating and collector production is generated on location, CO<sub>2</sub> neutrally, by renewable energy.

## Our strengths

We are an experienced partner for cost-efficient photovoltaic installations. As system supplier we do not compromise on quality, performance and durability. We work with selected specialist companies. Thanks to their many years of experience, our support and individual planning tools, you receive solutions optimally tailored to your needs

## System applications

We combine top brand components with our own products into perfectly meshing systems. We deliver grid-connected installations for single- and multi-family homes as well as farm uses, public facilities and large commercial projects. We offer a wide range of special architectural solutions and off-grid stand-alones.

**The many advantages of our solar power systems are explained on the following pages**

### SYSTEM ADVANTAGES

- CO<sub>2</sub>-neutral power production
- Unaffected by power price development
- Safe investment, solid profit
- Favorable funding
- Assured grid intake in many countries
- Active contribution to energy transformation
- Limitless solar energy

### WAGNER SOLAR STRENGTHS

- Optimally fine tuned systems
- High quality components
- Customer-friendly warranty services
- Leading technologies
- Our own TRIC racking systems for long-term stability
- Distribution by specialized installers



# Think ahead - take the first step to independence

Investments in solar power installations have to produce ecological and financial yields. Precise analysis and planning, meticulous choice of top-quality components and an experienced solar installer are key to your solar success.

## How the sun gets into the power socket

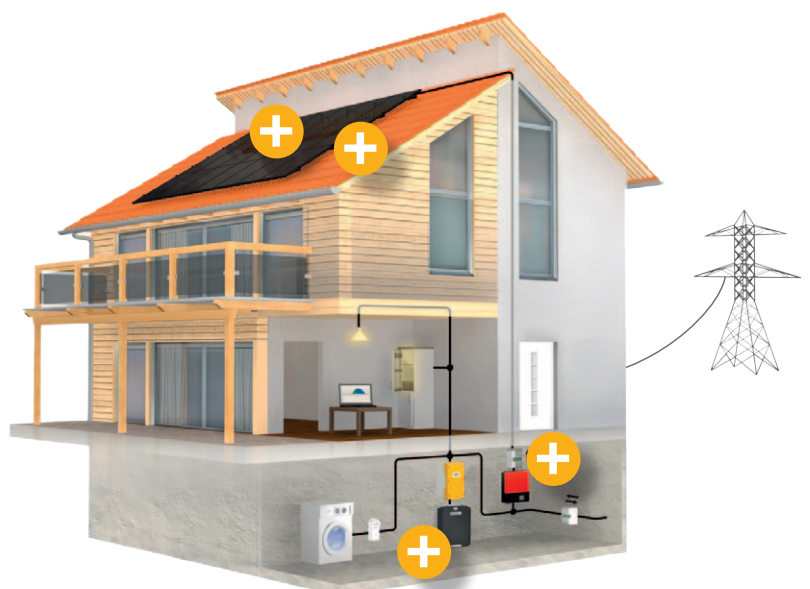
Maximum yields are achieved by aligning the panels towards the equator and tilting them according to the respective latitude, e.g. 30° for North-Western Europe. However our state-of-the-art solar power systems also achieve outstanding results under much less favorable conditions.

### FUNCTIONALITY

Photovoltaic panels convert solar radiation into electric energy. An inverter transforms it into grid-compatible alternating current which can be used by the owner of the installation or fed into the public electricity grid.

Intelligent solar power storages increase the consumption of self produced solar power, reduce the electricity purchase from the public grid and achieve independency from rising electricity prices.

In countries where the law provides for this, the owner will be paid by the power company for the solar power supplied to the grid.





## FIVE STEPS TO YOUR SOLAR POWER PLANT

### **STEP 1: CHOOSE YOUR PARTNER AND PLAN**

Choose a Wagner Soar partner in your area. We support them in location analysis and development of customized solutions. We use our professional tools to calculate the performance data of the installation and to draw up the detailed construction plans.

### **STEP 2: FUNDING, PROMOTION, TAXATION**

Inform yourself about favorable financing conditions and access the attractive regional and state financial supports. Talk to your tax consultant about possible write-off options.

### **STEP 3: INSTALLATION AND START-UP**

Insist on quality components and be aware that your solar success depends on every one of them. Your tradesperson will be happy to advise on the merits of components and manufacturers.

### **STEP 4: DON'T FORGET INSURANCE**

Certified quality, highest efficiency and longevity are the hallmarks of our installations. But you should nevertheless insure yours as a protection against, for example, a lightning strike or vandalism.

### **STEP 5: SECURING YIELDS**

From here on everything works by itself. The sun delivers the energy, your installation works for you, and the payment from your grid operator comes to you automatically.

**Congratulations on your own solar power station!**

## Our solar modules and mounting systems - highly efficient and long-lasting

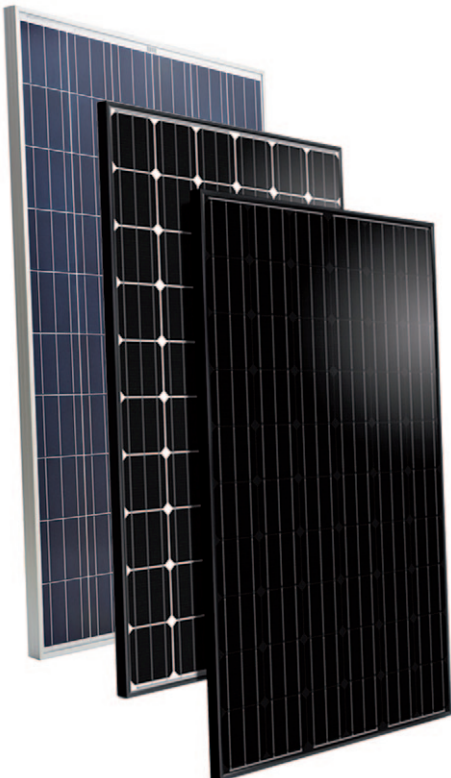
Solar panels are one of the key elements to the success of your installation. That is why we use only the very best components from leading manufacturers and make no compromises on quality, favorable prices and long-term peak performance. The same goes for our mounting systems.

### Versatile, strong performers

To offer the optimal solution for any application we cooperate with top PV panel manufactures. Our partners produce with state-of-the-art processes and meet the most stringent quality, safety and environmental requirements. They ensure the application of innovative and energy-saving technologies and offer an outstanding value-for-money ratio.

### Benefit from these advantages:

- Highest panel efficiency (up to 20 %)
- Low performance fluctuations
- Transparent warranty terms (up to 10 years on product, up to 25 years on performance)
- Test seals and quality certificates (TÜV / PV Cycle)
- Environment-friendly manufacture
- Outstanding value-for-money ratio
- Short energy amortization period







## TRIC Mounting Systems – simple. solid. smart

Solar power installations have to withstand severe strains. Wind load, snow load and stark temperature differences attack the material. So racking systems have to be extremely robust and durable to ensure secure hold under the toughest challenges. They must also be versatile to apply and easy to install.

## Our own development and production

For more than 35 years we have adapted our racking systems precisely to all panel and roof types. We produce and supply roof brackets, racking rails, panel clamps and a broad range of accessories. Our racking systems are suitable for on-roof mounting, flat and pitched mounting and greenfield installation.

## Quality and security

We process materials of the highest quality to the highest standards of workmanship.

Our innovative, patented module clamps and our standard roof anchors (P Alu Hvn top) have a general design approval under the Construction Products List of the German Institute for Building Technology (DIBt).

All components are optimally stable and TÜV certified. They are subjected to extensive material and safety tests, before receiving our marketing approval.



### TRIC MOUNTING SYSTEMS

- Our own development
- Versatile applications
- Individual design
- Optimal alignment for high yields

### STRENGTHS

- Fast, simple, safe installation from above
- For all roof shapes and roofing types
- Complete system with pre-assembled components
- Durable through high-quality materials

# Intelligent inverters and innovative batteries for your solar success

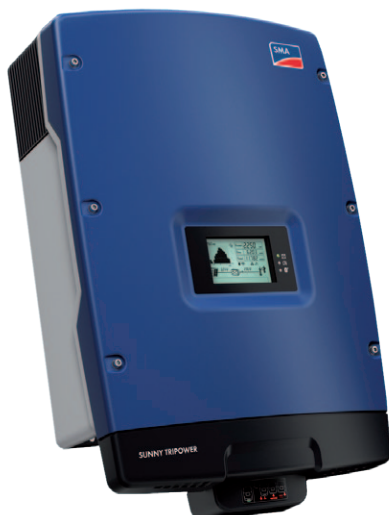
As interface with the public power grid, inverters have an especially important role. To achieve highest yields they have to be optimally attuned to the installation.

## Intelligent grid connection

We use only equipment from top of the range manufacturers. Precisely designed to perfectly mesh with various installation sizes and types, they assure maximized yields, trouble-free grid and in-house network integration and longevity. We warranty every product for five years.

## Communication technology

Whether as a status indicator for internal control or as an attractive, individually designed large display, our communication solutions are especially user friendly and strive to meet highest technical, functional and aesthetic demands. Optionally we offer possibilities for computer connection or global access to installation and performance data by mobile phone.





### High-performance storage solutions for maximum independence

The STOREit packages from Wagner Solar are the perfect combination of intelligent energy management and powerful batteries.

### Battery systems - solar power on demand

Highly efficient lithium-ion and lead-gel batteries or, respectively, our environment friendly salt water batteries, store solar power and make it available as needed, independent of momentary weather and daytime.



Lithium-Ion battery  
highly efficient and long-lasting

### The right storage solution for everyone

We offer various storage solutions for new installations as well as for retrofitting existing plants.



#### For example: Fronius Energy Package

Modular, subsequently expandable system, designed to optimize the fraction of self-used electricity. For maximum energy independence.

#### YOUR STOREIT ADVANTAGES

- ✓ Solar power on demand, highly independent from the grid
- ✓ Own consumption of solar power of up to 70%
- ✓ Notably reduced electricity bills
- ✓ Tried and tested powerful batteries

**TESVOLT**  
THE ENERGY STORAGE EXPERTS

Mercedes-Benz  
Energiespeicher



**HOPPECKE**  
POWER FROM INNOVATION

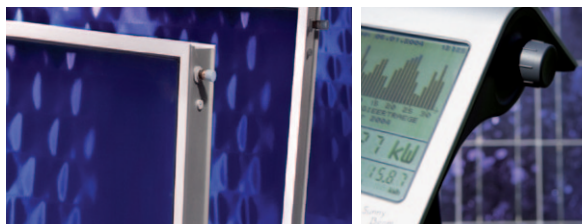
**LG Chem**

**BMZ**  
THE INNOVATION GROUP

# Power. Heat. Future

We are solar pioneers with foresight and have been successfully working with the sun for more than 35 years.

As a one-stop systems supplier we stand for integrated sustainable solar power, solar heat, mounting systems and energy technology..



## OUR PRODUCTS

### Solar power systems

- for private residential buildings
- for public facilities
- for commercial enterprises
- for agricultural applications
- for off-grid projects
- for investors

### Solar heating systems

- for private residential buildings
- for public facilities
- for commercial enterprises
- for agricultural applications

### Heat recovery

- for private residential buildings
- for public facilities
- for commercial enterprises



Wagner Solar has a constantly expanding international distribution network