



# Let the Sun Warm Your Life!

Solar heating systems





Our energy self sufficient and CO2 neutral collector factory as well as our new passive office building "Sonnenforum" (Sun Forum) demonstrate real-world ecological facility management with innovative energy concepts.

## Power. Heat. Future

As first-hour solar pioneers, we have successfully collaborated with the sun for decades. We offer solar power and heating systems and pellet-fueled heating technology through branches in Europe and North America. The employees own 100% of the company.

### Our solar passion

In the same way that we operate as an enterprise, carefully chosen components optimize interaction within our system solutions. Many competitive awards testify to their performance, countless operating projects prove it daily.



*Solar Keymark of SECUterm 160 P*

### Progressing together

We produce and supply solar heating systems and wood pellet heating technology\* for private users, public facilities, commercial enterprises and investors. All our solar collectors bear the European Solar Keymark certification.

We deliver installations of outstanding quality at the best value-for-money ratio, aiming to contribute substantially to an energy sea change.

### WAGNER & CO SOLAR TECHNOLOGY

1979 Established in Marburg  
150 Employees  
100% Employee-owned

Partner for solar power, solar and environment friendly space heating technology\*

Distribution through specialized partner installers

\* Pellet and CGB heating technology only available in selected markets



Entrepreneur of the year 2011



Corporate responsibility award

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# Help Shaping the Future – Improve Your Heating

Rising energy prices, climate change or personal conviction – there are many motivations to switch to renewable energies. The classic among them is solar heating. The technology is proven, safe and economical.

## The future heating energy

While fossil fuels are heading for depletion, the demand for resource and climate sparing heating technologies is growing constantly. Our solar heating systems are the stand-out option to heat economically and CO<sub>2</sub> reduced.

## Certified performance and quality

The European Solar Keymark certification scheme is the certification gold standard within the solar thermal industry. It guarantees high performance, durability and also is required for many government subsidy programs. All Wagner & Co solar thermal collectors as well as our SECUterm P systems presented here are Solar Keymark certified.

## Solar heating pays

Unaffected by rising gas, oil or power prices, solar heating equips your system for the future. More than 30 years of constant development and our own production ensure the high performance and economy of our installations.

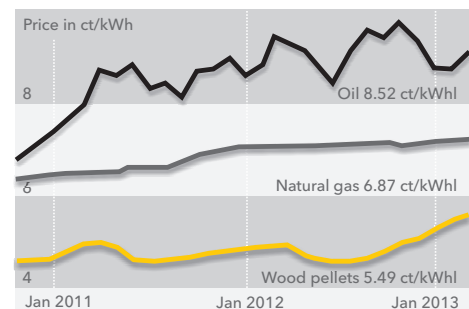
## Infinite applications

No matter whether solar collector, storage tanks or entire solar installations: Our products range from small systems for domestic water heating over combined DHW and space heating support all the way to complete heating solutions. Beyond that we offer many specialized solutions for turnkey large-scale installations.



The heating cost index (here for Germany) indicates continued drastic price hikes of heating oil during the last two years, while the price increase remained moderate for pellets.

### Trend of heating costs



Base: German street prices for purchase of 3000 l heating oil, 33,540 kWh natural gas or 6 metric tons wood Pellets (incl. vat and other costs), reference base: heating value.

Source: Dt. Energieholz- und Pellet-Verband e.V., 02/2013



Made in Germany - in our energy self sufficient and CO<sub>2</sub> neutral collector factory in Kirchhain, Germany, we manufacture our powerful collectors with state of the art production methods and quality management.

### Our path to success

We develop our solar systems with high-performance, quality components and assemble them to achieve maximum solar output, repeatedly setting new standards in the market.

In Test Stiftung Warentest (the leading German consumer product testing organization and magazine) 4/2003 our solar heating package SH 1440 AR came out first in a test of the "Combined solar installations without gas boiler" category. Test-result: SEHR GUT (excellent), 8 solar installations without gas boiler were tested: 1 sehr gut (excellent), 7 gut (good).

2008 Test victory at Stiftung Warentest. Verdict: „Sehr gut“ (excellent) for the Wagner & Co TOP line solar package BW 480plus AD as the most economic system in the test. „The test victor - relatively affordable and very powerful installation allowing to harvest much solar energy. Especially environment friendly - not least due to the very lower power consumption of the circulator pump.“\*

2009 Third test victory in a row: „Very powerful solar system with the best energy efficiency in the test.“\* for the solar heating package COMBI line SH 1440 AR. „The storage tank is one of the best insulated tanks in the test. The system consumes very little electricity.“\*

2010 ÖKO-TEST (German eco consumer testing organization and magazine): DHW preparation systems  
The solar package BW 720 AR came out first in the test, receiving the evaluation "Sehr gut" (excellent) for "(...) the highest solar fraction and thus the most energy saving."\* ÖKO-TEST 9/2010

2010 ÖKO-TEST: Installations with space heating support. COMBI line SH 1440 AR is one of the two top systems in the test, with an overall final assessment of "sehr gut" (excellent), described as "(...) excellent and economic system with the highest yield in the test."\* ÖKO-TEST 10/2010

*\* Translations from the respective German magazine publications. Originals upon request.*

#### SOLAR HEATING ADVANTAGES

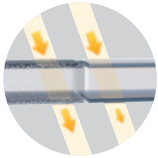
- Free heat energy for space heating and hot water supply
- Unaffected by oil and gas price development
- Ecologically and resource friendly
- Low entry costs, solid savings
- Good subsidy and financing conditions
- Active contribution to an energy revolution
- Limitless availability of solar energy

#### WAGNER & CO STRENGTHS

- Optimally fine tuned systems
- Maximum energy savings
- High quality of all components
- Safe and reliable system operation
- Certified products
- Lasting high yields
- Our own structurally approved TRIC racking systems
- Customer-friendly warranty services

# Utilize the Sun – Benefit from our Systems

Our solar packages assure highest efficiency and reliable operation. Their strength lies in perfectly harmonized components - from collector to racking system and solar controller to storage tank and pellet heating boiler.



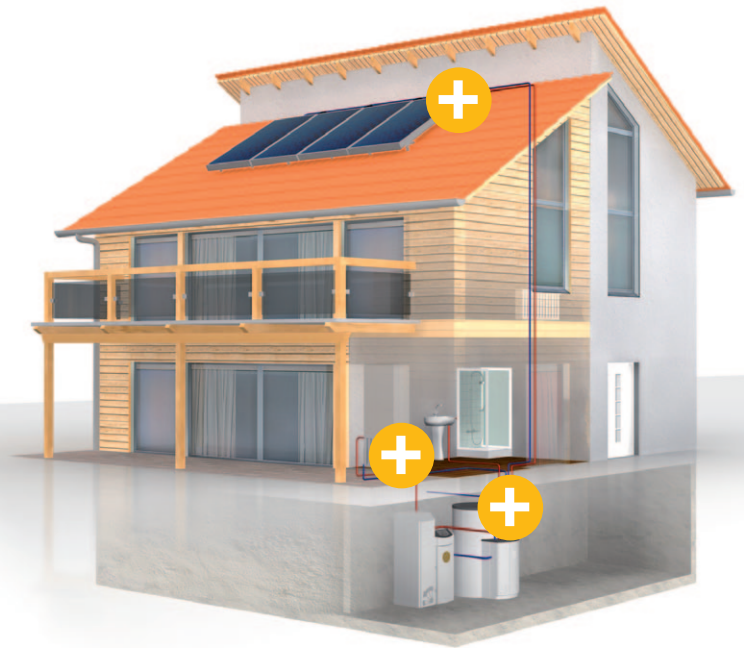
## High-performance collector EURO L20 AR

Our EURO L20 AR high-performance collector is fitted with sunarc® anti-reflective glass, delivering 6% to 10% higher solar yield. Its flat plate absorber with highly selective vacuum coating optimally converts sunlight to heat. Heat loss is kept minimal by seamless all-around insulation. As one of the world's highest yielding flat plate collectors, it is the linchpin of our economic solar heating systems.



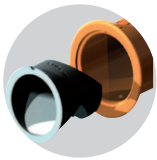
Solar Keymark  
011-7S481 F

Solar Keymark certification of EURO L20 AR



## Our TRIC racking systems

We have developed and produced our own racking systems for more than 30 years. All TRIC components are widely applicable, robustly finished and of durable quality.



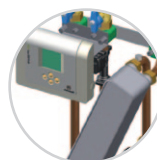
### Energetically optimized storage tanks

Our solar storage tanks, be they DHW, buffer or combined storages, are characterized by a maximum of heat keeping capacity. The combination of generously sized insulation and innovative technology minimizes heat losses during all operation cycles. One example is our patented convection brake CONVECTROL: it reduces heat losses at storage connections by up to 50%!



### High efficiency solar and space heating circulators

The pumps take care to keep your solar system's circulation healthy, balanced and efficient. Thanks to ECM technology the solar circulator provides perfect power at minimized power consumption. In 2012 it received the prestigious innovation award at of the OTTI Symposiums for Thermal Solar Technology. 21st century ECM technology runs our heating circulators as well.



### Hygienic hot water with freshwater units

With our RATIOfresh freshwater units we can offer you a contemporary and exceptionally hygienic technology for domestic hot water preparation. Its integrated stainless steel plate heat exchanger and state of the art adaptive sensor controls heat your water whenever you actually need it - on demand. Depending on your requirements you can choose from units with various flow rates, ranging from 20 to 80 liters per minute.



### Intelligent controllers

The members of our clever family of SUNGO solar controllers tirelessly keep an eye on the operation of your solar installation and constantly arrange for smooth and comfortable hot water supply. To fit all sizes and applications, SUNGO controllers come in various versions, for small DHW systems all the way to utility scale process heat plants.

## MORE THAN THEIR PARTS

**Our systems deserve this Aristotelian insight: for decades we have worked towards the goal of designing perfectly integrated and fine tuned solar energy systems. Test results and accolades keep confirming our course.**



## COMPACT line

Compact solar heating system with flow through freshwater unit for one and two family homes.

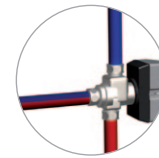
**COMPACT line unites many advantages in a visually pleasing and space saving installation. Flow through on demand DHW preparation, solar space heating support and power saving operation with high efficiency pumps.**

### Convincing design and top efficiency

Our all-in-one compact system integrates all state of the art components. Solar circulator, freshwater unit, system controller, storage tank and manifold are combined in a single visually pleasing unit. Excellent insulation of all parts minimizes any potential heat losses. Thanks to the high degree of pre-assembly, the system is extraordinarily easy and fast to install and well suited even for houses without basement space.

### Compatible and future proof

Up to two independent heat generators can be included in the hydronic solar heating system and control, offering free choice of the utilized fuel. For example, combine the system with an efficient natural gas CGB boiler, a CO<sub>2</sub> neutral wood pellet boiler or a modern water pocket fire place.



The RATIOcompact unit constantly adjusts the temperature it feeds to the heating system to an optimal level.



SCOPE OF SUPPLY	DETAILS
4 to 6 EURO L20 AR or L20 MQ AR 1 Collector mounting kit 1 RATIOcompact 700 or 1000  1 RATIO 2G buffer storage tank 1 Expansion vessel set 1 Solar heat transfer liquid	10.4 to 15.7 m <sup>2</sup> gross collector area, Solar Keymark certified On-roof (roof parallel), integrated in-roof or free standing setup Compact unit with solar system, DHW freshwater unit and hydronic heating connection with integrated controller; mounted directly to the storage 700 l or 1000 l volume  DC 20



## FRESH line

Multi purpose solar heating system with freshwater unit

The FRESH line system can be used for solar hot water and space heating. Many combination possibilities make it variable in size. It can be combined with all boilers and delivers hygienic fresh water.

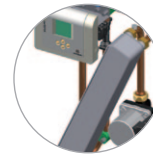
### Many uses

The flexible system is offered in three yield categories delivering 20 to 80 liters per minute. Collector fields and storage cylinders also come in various sizes. This flexibility can optimally meet the needs of single, double and multiple family homes, hotels and other buildings.

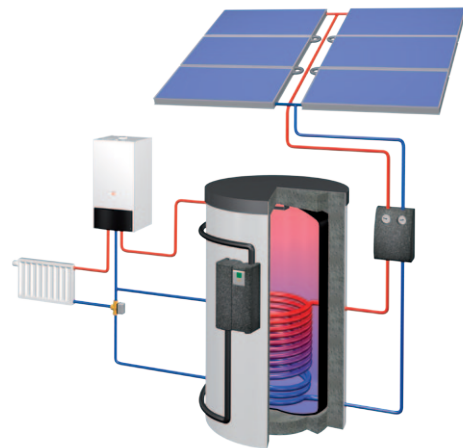
The FRESHline MQ packages are suited for slim collector rows. The EURO L20 MQ collector was especially designed for horizontal installation and collector fields with up to 50 m<sup>2</sup> collector area in combinations of serial and parallel connections.

### Hygienic fresh water

The FRESH line system heats water with a large heat exchanger using the flow through heater principle - but only when you need it. That optimizes hygiene and especially protects against the formation of legionella.



The RATIOfresh fresh-water DHW unit assures hygiene by avoiding any microbial contamination..



#### SCOPE OF SUPPLY

4 to 12 EURO L20 AR flat plate collectors  
 1 Mounting system set  
 1 RATIOfresh freshwater unit  
 1 or 2 RATIO buffer storage cylinder  
 1 CIRCO solar circulation unit  
 1 SUNGO solar controller  
 1 Canister solar heat transfer liquid

#### DETAILS

10.4 - 28.8 m<sup>2</sup> total area, Solar Keymark certified  
 For on-roof, in-roof or free-standing installation  
 Type 200, 400 or 800  
 With 700, 1000 or 1500 l capacity  
 With expansion vessel  
 SL or SXL  
 DC 20, Propylene glycol with inhibitors



## COMBI line

Award winning solar space heating and hot water system for one and two family homes

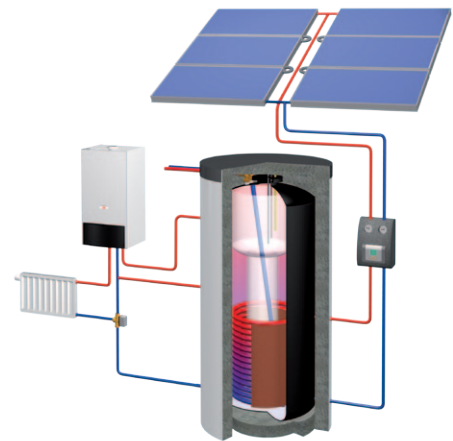
Our COMBI line package received excellent evaluations. It came out top of its class in tests by independent German consumer and product testing institutes (highest yield, most economic). It is highly durable and reliably delivers hot water with space heating support at low cost.

### Economic and easy to operate

The efficient system saves up to 30% gas and oil and can also be combined with a wood pellet heating boiler. It enables high output at constant temperature.

### Combi cylinders and convection brakes

The tank-in-tank construction makes the TERMO combi cylinder especially compact and the 120 mm polyester fiber fleece jacket insulation gives it outstanding insulation. The patented CONVECTROL convection brake substantially reduces storage losses at the pipe connections.



SCOPE OF SUPPLY	DETAILS
4 to 6 EURO L20 or L20 MQ AR collectors	10.4 - 15.7 m <sup>2</sup> total area, Solar Keymark certified
1 Mounting system kit	For on-roof, in-roof or free-standing installation
1 TERMO combined solar storage tank	700 or 1000 l capacity
1 CIRCO solar circulator	With expansion vessel
1 SUNGO solar controller	SL or SXL
1 canister solar heat transfer liquid	DC 20, Propylene glycol with inhibitors





## TOP line

Solar hot water system  
for one and two family homes

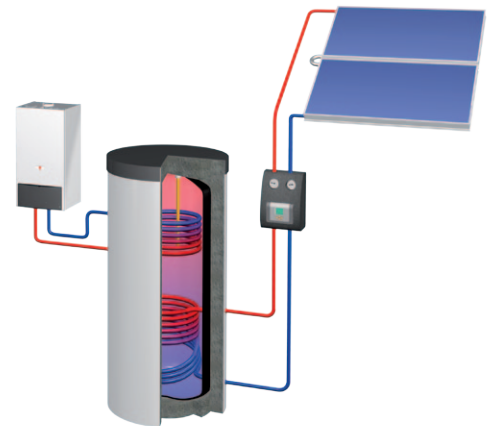
The multiple award winning TOP line hot water system combines the advantages of the high-performance EURO L20 AR collectors with the strengths of the highly efficient ECOplus solar storage cylinder and an intelligent solar circulation unit with integrated SUNGO solar controller.

### Perfect price and performance

As the ideal solution for water heating at an extremely fair price, the TOP line system works with generous collector surfaces and strongly insulated components. The ECOplus storage cylinder is fitted with two generously sized heat exchanger coils for the solar and backup water heating circuits.

### Optimal system yield

To maximize energy saving, the TOP line system can also be supplied with a power-saving ECM solar pump. Optionally fit it with our patented CONVECTROL convection brakes to minimize losses at storage connections by up to 50%.



#### SCOPE OF SUPPLY

- 2 or 3 EURO L20 AR flat plate collectors
- 1 racking system set
- 1 ECOplus solar storage cylinder
- 1 CIRCO solar circulation unit
- 1 SUNGO solar controller
- 1 canister solar heat transfer liquid

#### DETAILS

- 5.2 - 7.8 m<sup>2</sup> total area, Solar Keymark certified
- For on-roof, in-roof or free-standing installation
- 300 and 400 l capacity
- With expansion vessel
- S, SL or SXLplus
- DC 20, Propylene glycol with inhibitors



## SECUterm

Thermosiphon-System – solar hot water, safe and reliable

Newly developed thermosiphon hot water system for tropical and subtropical regions. With innovative overheat protection.

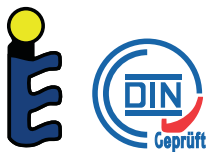
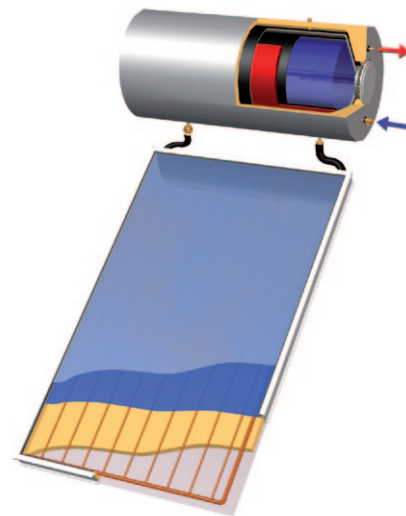


### Top class solar collector

Especially designed high performance collector from the tried and tested Wagner & Co EURO collector line. To reduce heat loss, the return pipe is integrated in the collector. The system has a modern thermostatic overheat protection limiting the solar hot water storage temperature to 80 °C.

- Low maintenance at high life time
- No loss of solar fluid
- No freshwater loss from overheating

All in one kit with thought-out time saving and easy to install mounting systems. Comes with well insulated storage tank, insulated connection tubes and safety valves for solar and hot water loops.



**Solar Keymark**  
**011-7S1749 A**

*SECUterm 160 P, 200 P and 300 P  
are Solar Keymark certified*

#### SCOPE OF SUPPLY

- 1 or 2 EURO TS collectors
- 1 Mounting system kit
- 1 Solar DHW storage tank
- 1 Canister solar heat transfer liquid

#### DETAILS\*

- 2.24 - 4.48 m<sup>2</sup> total collector area
- For free-standing or on-roof installation
- With 160, 200 or 300 l capacity
- DC 20, propylene glycol with inhibitors

\* Solar Keymark certification of the complete SECUterm 160 P, 200 P and 300 P systems



## ECO line

Affordable solar water heating kits

### Efficient flat plate solar collector EURO L42 HTF or EURO L22 AR

Compact circulation unit - solar transfer station CIRCO with solar controller SUNGO mini, S or SL. Intelligent flow rate control assures higher yields. Thermal sensors and a flow meter allow monitoring the system during full operation. Secure operation is assured by two heat resistant full-metal check valves prohibiting vertical convection.



### Solid solar hot water storage cylinder ECO

Thousandfold tried and tested and continuously improved design. Excellent insulation, proven efficiency and durability. Corrosion protection by enamel coating and sacrificial anode. Choice of auxiliary heating options.

SCOPE OF SUPPLY	DETAILS
2-4 EURO L42 HTF or L22 AR collectors 1 Mounting system kit	4.48 - 8.96 m <sup>2</sup> total area, Solar Keymark certified For on-roof, in-roof or free-standing installation
1 ECO solar DHW storage tank	With 300, 400 or 500 l capacity
1 SUNGO solar controller	mini, S or SL
1 CIRCO solar circulation unit	With expansion vessel
1 Canister solar heat transfer liquid	DC 20, Propylene glycol with inhibitors



## SUNtwin

# Solar Power and Solar Heat - From Your own Roof!

We developed SUNtwin as a package optimally fine tuned for families: one solar system for electricity generation together with a second solar installation harvesting the sun's heat - united on a single roof. The integrated state of the art freshwater unit takes care of hygienic and energy efficient on-demand hot water preparation.

### Smart energy mix

Cleverly sizing the SUNtwin solar heating and power components allows to achieve an optimal cost-benefit ratio. The self consumed solar electricity reduces your annual power bill while at the same time increasing your energy freedom from utility companies and price hikes! The generated solar heat covers up to 30% of your annual heating demand.

**SUNtwin seamlessly meshes with conventional heat generators from any manufacturer, for example our wood pellet boiler range XILO or our condensing gas boiler range.\* For even more freedom you have the option to integrate one of our STORE it intelligent solar power storage packages into your SUNtwin system.**

**Invest in your own freedom now and produce your own energy!**

### High-tech with elegance

Who says that high technology has to be ugly? SUNtwin is not only an ideal energy savings package but also convinces with its pleasing design. The carefully attuned colors of collectors and PV modules together with their harmonious arrangement on the roof significantly improve the architectural impression of your house

\* Pellet and gas boilers currently only available in Germany.

**SOLAR-MARKETING-AWARD 2012  
for SUNtwin, by LG Solar**



## Are You Ready for Solar Heat?

### The next step

Now contact your solar installation partner or us. We will gladly recommend a suitable installer.

### Plan together

Work with our selected specialist installers to realize your solar heating project fast and reliably. Thanks to their many years in the industry, the training we regularly offer them as well as our individual planning tools, your installation will be optimally customized to your needs.

### Additional benefits

Installations we have planned receive the Wagner & Co safety certificate. We also offer our customers additional benefits such as taking back used installations and collectors, insurance (glass breakage, lightning damage) and a qualified network of installers.

### Attractive subsidies in some countries

In some countries attractive funding and promotion is available for solar heating installations and pellet boilers. Read up on quotations or ask your local solar installer.

### FUNCTIONAL GUARANTEE

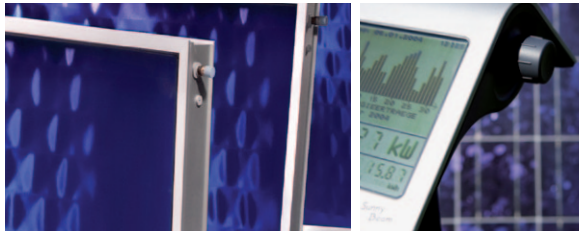
We are convinced of the high quality of our products and offer you functional guarantees beyond the legally required 2 years for the following products:

**Flat plate collectors:** 10 years\*  
**Solar storage tanks:** 5 years\*

\* Please refer to our home page or contact us directly for detailed warranty conditions.

# Power. Heat. Future

We have been solar pioneers since the start and have cooperated with the sun for many years. As systems supplier we offer holistic, sustainable solutions in solar power, solar heating and pellet-fueled heating 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 and pellet-fueled heating technology\*

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

\* Pellet and CGB technology currently only available in Germany

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Diegem (Brussels)



### France

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Simandre (Lyon)



### Italy

**Wagner & Co**  
Solar Italia S.r.l.  
Pizzighettone (Cremona)



### Spain

**Wagner Solar S.L.**  
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### USA

**Wagner Solar Inc.**  
Boston (MA)

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