



## Let the Sun Warm Your Life

Solar heating systems





## 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.

### Progressing together

We produce and supply solar heating systems and wood pellet heating technology\* 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 an energy sea change.

#### WAGNER & CO SOLAR TECHNOLOGY

1979    Established in Marburg  
 400    Employees  
 100%    Employee-owned  
 Partner    for solar power, solar heating,  
               pellet-fueled heating technology\*

Distribution by specialized installers

\* Pellet technology only available in Germany

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# Improve Your Heating to Shape the Future

Rising energy prices, climate change or personal conviction - there are many drivers 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.

## Solar heating pays

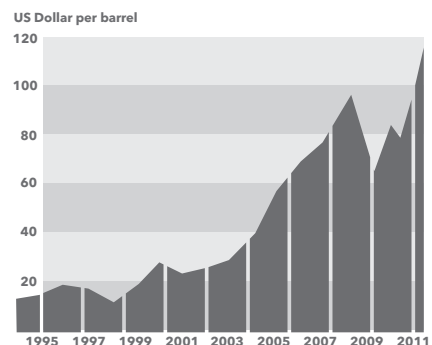
Unaffected by rising gas, oil or power prices, solar heating equips your system for the future. More than 30 years of constant development and our own production ensure the high performance and economy of our installations.

## Diverse applications

For collectors, storage cylinders or entire solar systems, we supply from simple thermosiphon systems, small water heating installations to combined systems for hot water and space heating support. We customize large installations.



Fossil fuels are becoming scarcer and more expensive, and as recent reactor disasters clearly illustrated, power from nuclear fission has never been able to shed its safety deficits - and never will. The price for crude oil increased almost four-fold during the last 20 years, while the sun keeps shining for free.





We produce in our energy self-sufficient collector factory. In our passive house office building a 65 m<sup>2</sup> solar heating installation with an 85 cubic meter seasonal storage supplies approx. half of the heating energy.

### Our success formula

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.

1986 – Starting in our early years our engagement was often  
2003 awarded. With the best cost-performance ratio, we were convincing winners of the first solar comparative test run by the German consumer testing agency, Stiftung Warentest, and won awards for our collectors, installations and package solutions.

2008 Stiftung Warentest win, rated “Excellent”, for the TOP line solar package BW 480plus AD as a sensibly-priced installation. “Especially environment-friendly, not least because of the pump’s very low power consumption,” said the citation.

2009 Third successive test win in a row: “Highest energy yield and best cost-performance ratio” for the solar heating package, COMBI line SH 1440 AR.

2010 Winner of the water heating eco test, rated “Excellent” with outstanding features, “Highest solar yield, biggest energy saving and high-grade components” (ÖKOTEST magazine 9/2010).

2010 Eco test of heating support systems: “The Wagner system achieves the highest yield and with its relatively low price is one of the most economic” (ÖKOTEST magazine 10/2010).



#### SOLAR HEATING ADVANTAGES

- CO<sub>2</sub>-neutral heating and hot water preparation
- Unaffected by oil and gas price development
- Ecologically and resource friendly
- Low entry costs, solid savings
- Good promotion 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
- Lasting high yields
- Our own structurally approved TRIC racking systems
- Customer-friendly warranty services

# Let the Sun Work for You with Our Systems

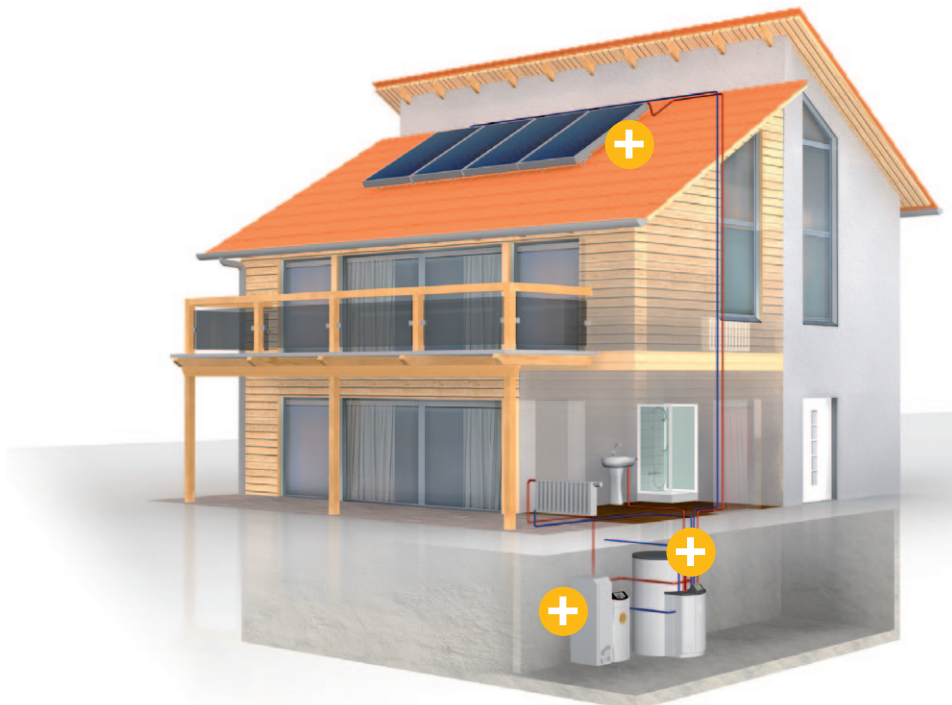
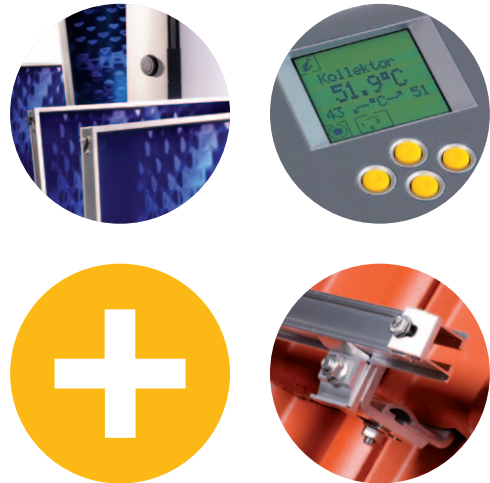
Our solar packages assure highest efficiency and reliable operation. Their strength lies in perfectly harmonized components - from collector to racking system and solar controller to storage tank and pellet heating boiler.

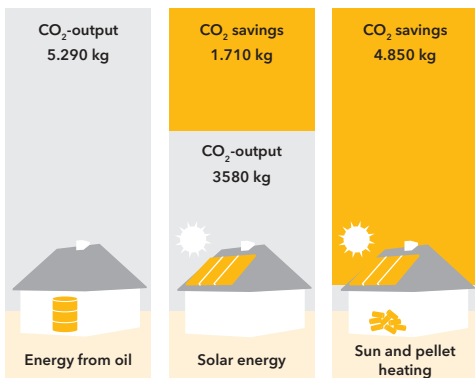
## High-performance collector EURO L20 AR

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.

## 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.





### Minimal heat losses

The effective insulation of all components in the solar circuit, especially our high-quality storage tank insulation, secures minimal heat loss in the operation of the installation. This is achieved by intelligent technologies like our CONVECTROL convection brakes at the pipe connections, favorable construction forms and generous insulation strengths.

### CO<sub>2</sub> neutral heating

A Wagner & Co solar heating package can reduce your CO<sub>2</sub> output by more than 30%. When using a wood pellet boiler almost 100% CO<sub>2</sub> neutrality can be achieved for a 150 m<sup>2</sup> single family home with 70 kWh/m<sup>2</sup> specific heating requirement.

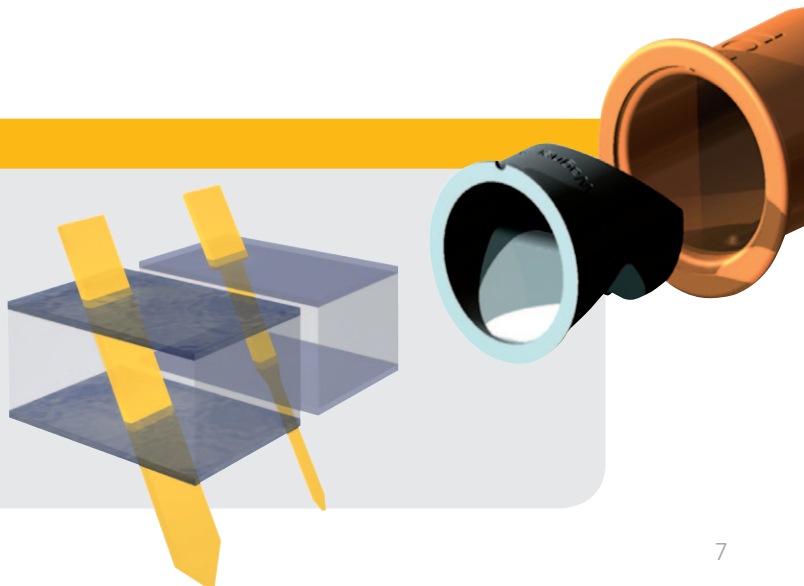
### INNOVATIVE TECHNOLOGIES

#### Sunarc® anti reflective glass (left image)

Thanks to its etched-in nano surface structure, sunarc® anti reflective glass allows considerably more light to enter the collector than conventional glass - especially for slanted light. As a result our collectors achieve a 6 to 10% yield increase.

#### CONVECTROL (image to the right)

Our patented convection break reduces heat losses at pipe connections by up to 50% per connection.



## SECUterm

Thermosiphon-System – solar hot water, safe and reliable

Newly developed thermosiphon hot water system for tropical and subtropical settings. Featuring innovative overheat protection.

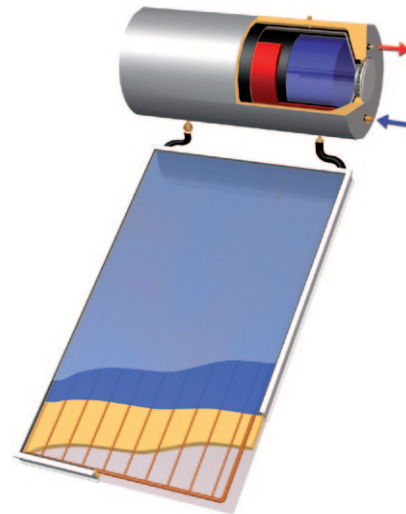


### Top-class solar collector

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 racking systems. Comes with insulated connection tubes and safety valves for solar and hot water loops.



#### SCOPE OF SUPPLY

- 1 or 2 EURO TS collectors
- 1 racking system set
- 1 solar storage cylinder
- 1 canister solar liquid

#### DETAILS

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



## 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 EURO L22 AR collectors	4.48 - 8.96 m <sup>2</sup> total area
1 racking system set	for on-roof, in-roof or free-standing installation
1 ECO solar storage cylinder	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 liquid	DC 20, Propylene glycol with inhibitors



## TOP line

Solar hot water system  
for single and double 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 station.

### Perfect price and performance

As the ideal solution just 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 auxiliary heating circuits.

### Optimal system yield

To maximize energy saving, the TOP line system can also be supplied with a power-saving ECM solar pump. It can also be optionally fitted with CONVECTROL convection brakes.



#### SCOPE OF SUPPLY

- 2 to 4 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 liquid

#### DETAILS

- 5.2 - 10.4 m<sup>2</sup> total area  
for on-roof, in-roof or free-standing installation
- 300, 400 or 500 l capacity  
with expansion vessel
- S, SL or SXL
- DC 20, Propylene glycol with inhibitors





## COMBI line

Solar heating and hot water system for single and double family houses

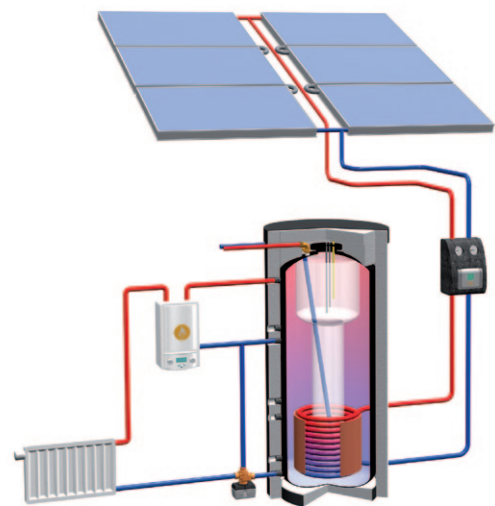
Our COMBI line package won tests by Stiftung Warentest (leading German consumer testing agency) and ÖKOTEST (leading German eco-consumer organization). It is robust and reliably delivers hot water with space heating support at low cost.

### 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 AR flat plate collectors	10.4 - 15.7 m <sup>2</sup> total area
1 racking system set	for on-roof, in-roof or free-standing installation
1 TERMO combined solar storage cylinder	700 or 1000 l capacity
1 CIRCO solar circulation unit	with expansion vessel
1 SUNGO solar controller	SL or SXL
1 canister solar liquid	DC 20, Propylene glycol with inhibitors



## FRESH line

All-purpose solar heating system with freshwater unit

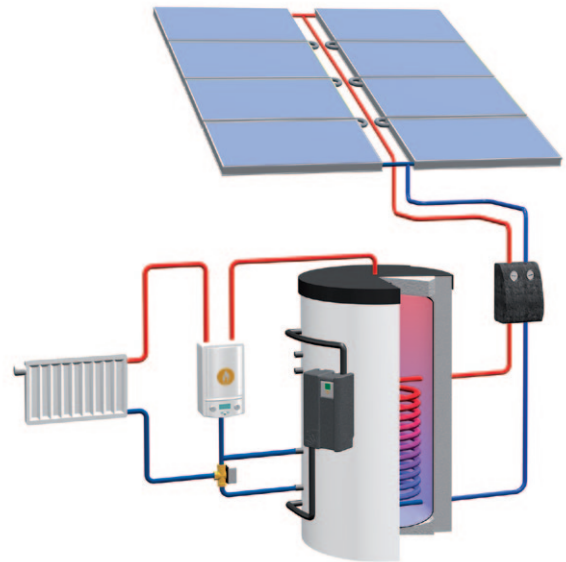
The FRESH line system can be used for solar hot water and space heating. Many combination possibilities make it variable in size. It can be combined with all boilers and delivers hygienic fresh water.

### 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. FRESH line MQ packages are offered for long collector rows.

### Hygienic fresh water

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



#### SCOPE OF SUPPLY

4 to 12 EURO L20 AR flat plate collectors  
 1 racking 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 liquid

#### DETAILS

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



### High-performance combined systems

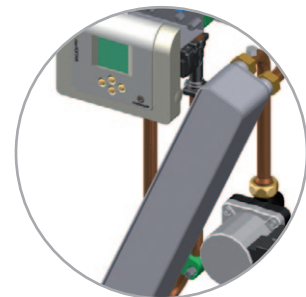
Be it with EURO L20 AR collectors or with special EURO L20 MQ AR flat plate collectors, our FRESH line system can be combined with all other generators such as gas boilers and various types of solid fuel boilers.

#### Powerful

The EURO L20 AR high performance collector with laser-welded absorber and sunarc® anti reflective glass increases the light transmission rate to 96%, upping the solar yield by 6 to 10%.

### Storage cylinders for hot water and heating

The RATIO buffer storage tank combined with the RATIOfresh fresh water unit delivers hot water and heating support. The outstanding insulation of 100 to 120 mm polyester fiber fleece prevents unnecessary heat losses.



#### Very hygienic

The intelligently controlled RATIOfresh flow-through heater guarantees optimal water quality.

### Intelligent control technology

Our controllers enable optimum solar yields and comfortable water heating. Our SUNGO solar controllers meet various demands and installation sizes.

## CONVINCING FOR INSTALLERS

#### The FRESHline is

- available in various sizes
- always equipped with freshwater heating
- particularly efficient



## TRIC

Safe racking systems for easy handling

Wagner & Co racking concepts offer time saving and weather proof installation with guaranteed safety for the entire collector lifetime. We also assist with certified structural dimensioning.

### EURO TRIC A und TRIC F racking systems - the new generation

Durable high-grade aluminum and stainless steel components, pre-assembled components for fast and easy installation. Roof bracket varieties for practically every roof type. The roof anchors come with pre-assembled rail connectors and collector clamps, and the ingenious TOPmounting saves time - and nerves!

### On-roof installation - safe and quick

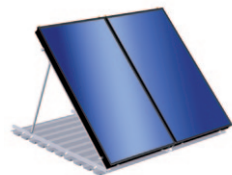
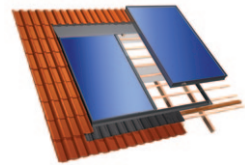
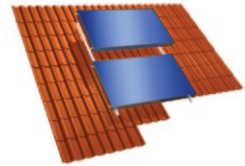
Light weight and high quality aluminum collector rails with coupling pieces. No significant penetration of roofing required.

### In-roof installation - appealing design

Uniquely smooth roof integration for an appealing impression. Wind and snow loads are negligible.

### Free standing racks - limitless flexibility

Sturdy aluminum triangles with variable pitch, delivered folded up, saving space, time and costs. Norm-conforming structural sizing can get certified.



## CONVINCING FACTS FOR INSTALLERS

### TRIC features

- Pre-assembled components for fast installation
- Top-mounting for easy handling
- Roof-brackets fit for any roof
- Variable installation on almost any surface



## Are You Ready for Solar Heating ?

### 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 support funding 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 WARRANTY

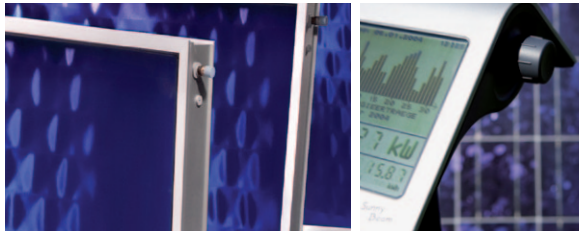
We are convinced of the high quality of our products and offer you functional warranties beyond the legally required 2 years for the following products:

**Flat plate collectors:** 10 years\*  
**Solar storages:** 5 years\*

\* please refer to our homepage 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 technology only available in Germany

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