

Energy from the sun



VIESSMANN

Heat from the sun – free energy delivered to your door

Anyone who invests in a new heating system today should design it from the outset to include a solar thermal or photovoltaic system. This will allow you to benefit from lower energy consumption and also look forward to lower monthly energy bills.

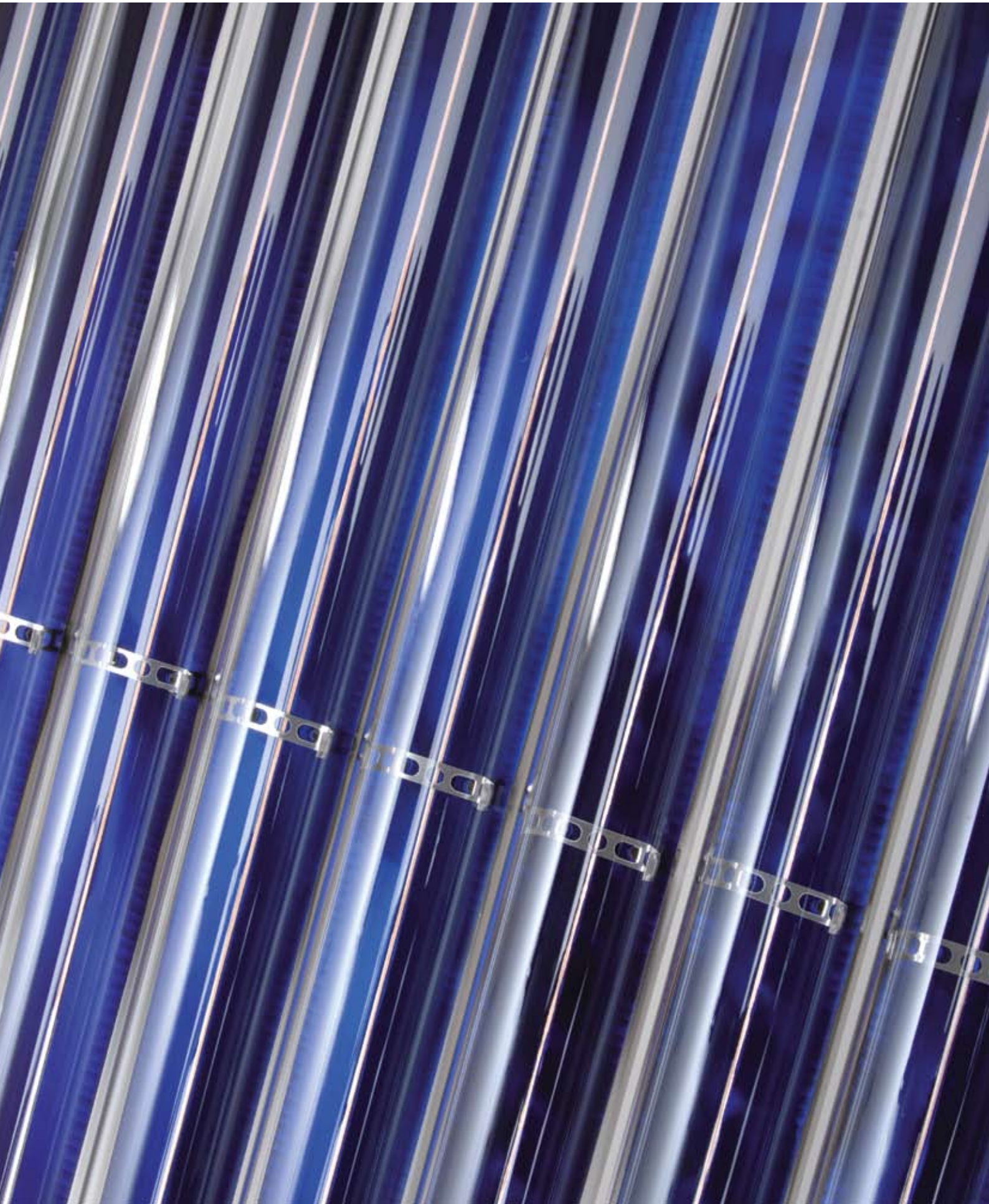
Furthermore, by installing solar collectors, you are demonstrating your commitment to protecting the environment, by sustainably lowering CO₂ emissions. To help you do this, Viessmann guarantees that all appliances and components work seamlessly and effectively with our futureproof technology.

Another argument for investing in solar technology that should not be underestimated is the associated increase to the value of your property.

On the following pages, you will find comprehensive information about the possibilities open to you with Viessmann solar technology, for energy-efficient domestic hot water (DHW) heating and central heating backup.

With more than 30 years' experience in the development and manufacture of solar thermal systems, you can count on Viessmann technology to be of the highest quality and completely futureproof.

It makes no difference whether you are starting out with a new condensing boiler for oil or gas, a heating system for wood, or even a heat pump – all Viessmann systems are designed to work in combination with solar technology. Don't forget our photovoltaic panels, which you can use with free solar energy to generate power, that is fed back into the public grid and remunerated month by month by your power supply utility company.



Overview

The Viessmann flat plate and tube collectors meet every requirement for efficient and cost-effective central heating backup and DHW heating. This brochure provides information about our current solar thermal and photovoltaic range, and contains plenty of other useful facts.



Saving energy and protecting the climate

from page 6

Find out why it is worth modernising your heating system now and extending it with an efficient solar thermal system. In doing so, you will be making an active and sustainable contribution towards protecting the climate and using less fossil fuel.



Solar thermal

from page 12

The flat plate and tube collectors from the Vitosol series can be optimally matched to the relevant energy demand.



Photovoltaic

from page 24

The Vitovolt system turns every homeowner into a generator of renewable power. You can benefit from a guaranteed yield and increase the value of your house due to the high quality of Viessmann components.



Comfort and economy with system design

from page 30

Use the most advanced system technology to control your heating and solar thermal system. The intelligent Vitosolic energy management system communicates very effectively with the heating control unit, which significantly lowers heating costs.



Saving energy and protecting the climate

Viessmann is aware of its responsibility for the sustained protection of the environment. Its company philosophy and products are oriented towards this duty.



"Nothing is so good that it cannot be improved." This maxim is at the heart of the company's principles. In this industry, Viessmann can rightfully claim to be the leader in quality and technology, and as such, aims to continually set new standards.

Of course, this applies in particular to its product range, which is consistently geared towards significantly lowering the consumption of fossil fuels, and gradually replacing them with renewable sources of energy.

At around 40%, the heating market actually accounts for the largest proportion of energy consumption. The rest is shared by goods transport, personal transport and power. This will largely be indicative of most other industrial countries. Ever-rising energy costs mean that the emphasis is on reducing the consumption of fossil fuels as quickly as possible.

Condensing technology plus solar – an optimum result

Anyone who invests in a new heating system would do well to choose a condensing boiler. Taking current energy prices into consideration, it is the most economical choice. Viessmann oil and gas fired condensing boilers convert up to 98% of the fuel oil or gas used into heat.

By combining them with highly efficient solar collectors from Viessmann, you can save up to 35% on your heating costs, if you utilise the solar collectors for both domestic hot water heating and central heating backup. For DHW heating alone, the energy consumption required can be lowered by up to 60%.

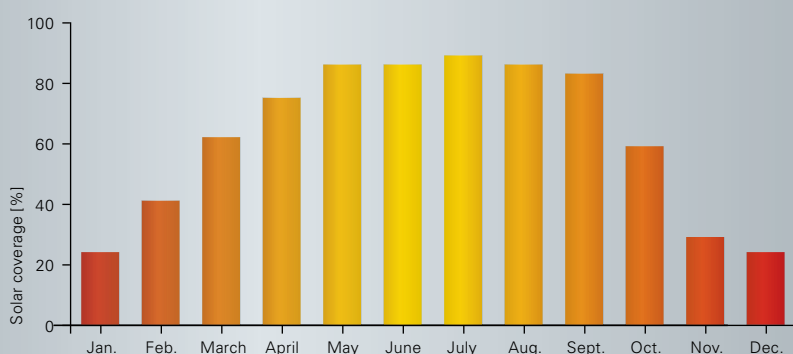
Viessmann offers you energy-efficient heating systems for oil, gas, solar, wood and natural heat. The pictograms and motifs will help to guide you.

What you need to know

Good reasons for extending your heating system with Viessmann solar heating and photovoltaic.

In a family home, solar energy covers up to 60% of the energy required for heating DHW. In the United Kingdom alone, there are still around 19 million households using outdated heating systems. Their owners are often completely unaware of how much money they are wasting unnecessarily on energy. Furthermore, these old systems have an impact on the climate through unnecessary CO₂ emissions that contribute to global warming.

By promptly replacing these systems with highly efficient condensing boilers in combination with solar technology, end users can cut down on energy usage by up to 35%. This would work out to be 15% of the total UK energy consumption, with annual CO₂ emissions being reduced by 92 million tonnes at the same time.



In a family home, solar energy covers up to 60% of the energy required for heating DHW.

Heat from the sun

Around one third of the total energy demand in the UK is expended on heating buildings. Energy-conscious construction and economical heating systems, such as condensing technology, can substantially reduce this consumption. This then contributes to the preservation of resources and to the protection of the earth's atmosphere.

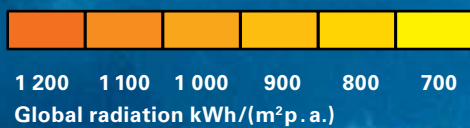
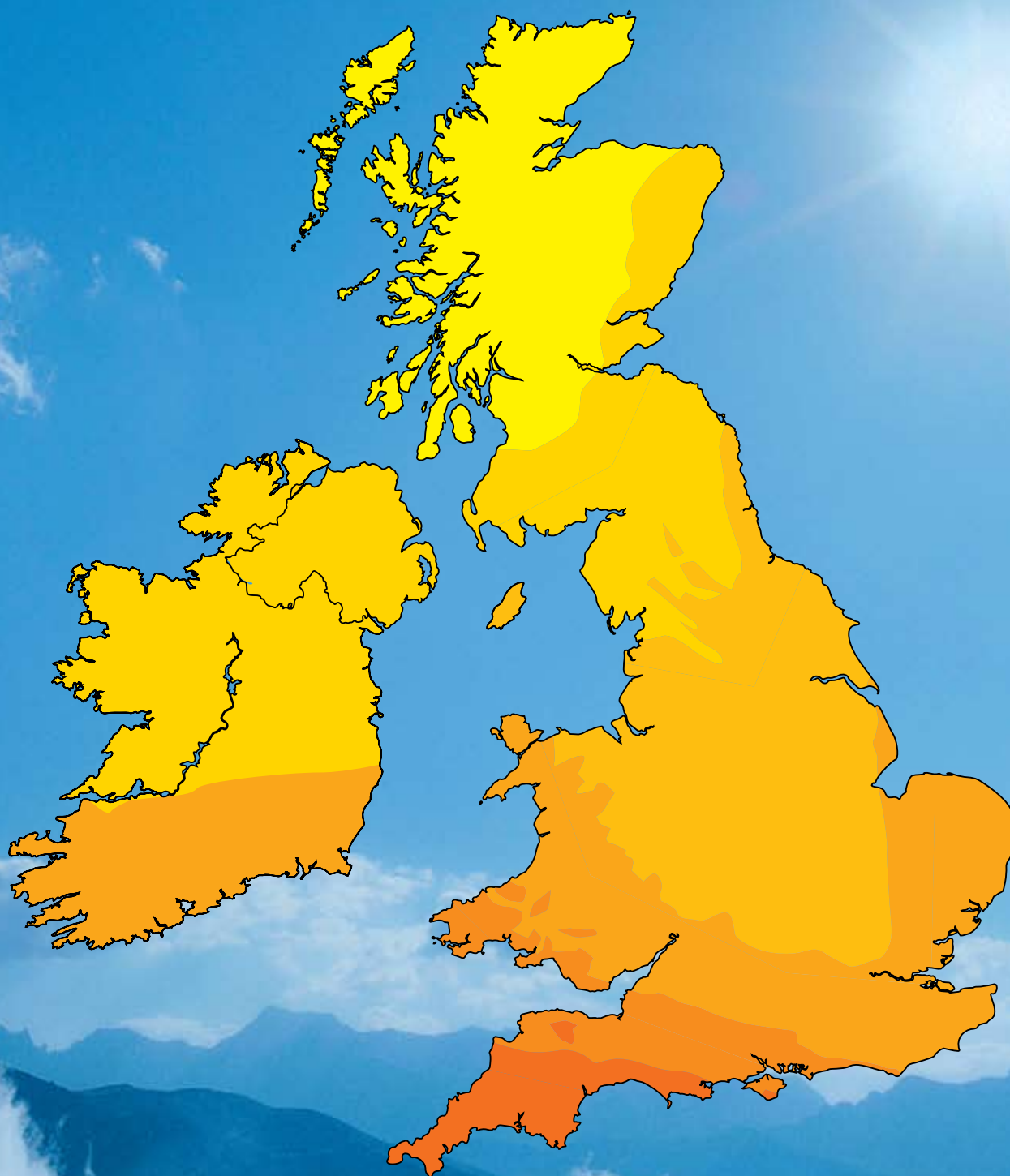
One important savings potential is offered by DHW heating. In our latitudes, solar collectors combined with a DHW cylinder represent the most interesting alternative to boiler operation, especially during the summer months. In spring and autumn, you may often be able to turn off your boiler when using solar energy to back up your central heating.

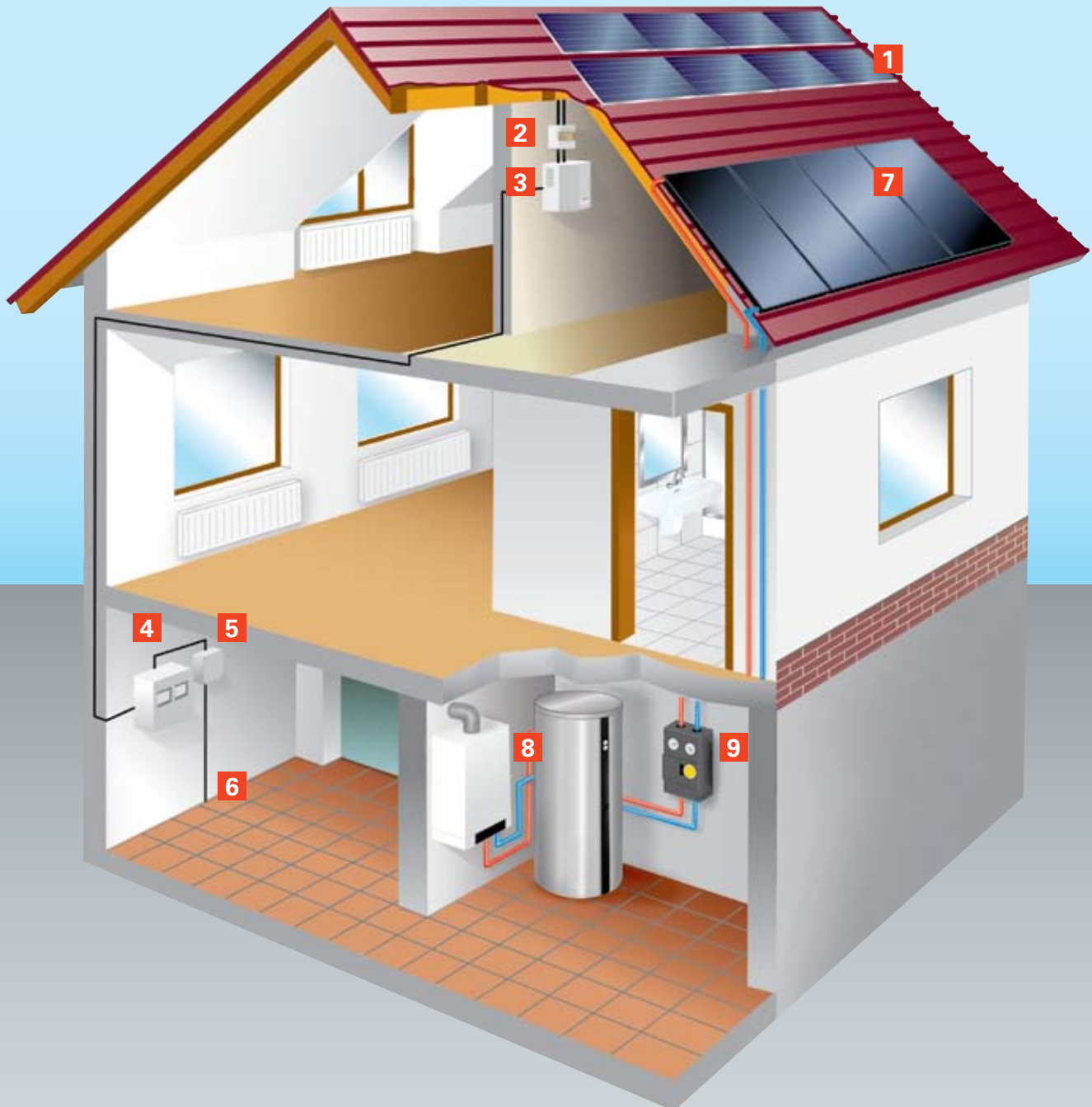
Power from the sun

With a photovoltaic system, you have your own power plant right on the roof of your house. Up to 100% of the total annual power consumption of a four-person household can be produced from it. Thanks to the feed-in tariff in effect since April 2010, money can be earned for every kilowatt hour of energy generated, plus additional money for any energy fed into the grid.

Government subsidies

Government subsidies can be claimed for the purchase of solar and photovoltaic systems provided the products are MCS registered and fitted by an MCS registered installer. After all, the investment costs will pay for themselves after just a few years because of the high energy savings. Up-to-date overviews can be found at www.viessmann.co.uk





- 1 Vitovolt photovoltaic panels
- 2 DC isolator
- 3 Inverter
- 4 Electricity meter for consumption and feed-in
- 5 Main fuse
- 6 Public grid

- 7 Vitosol solar collectors
- 8 Condensing boiler with dual-mode DHW cylinder
- 9 Solar-Divicon pump station

DHW heating and central heating backup with solar energy

Solar thermal systems are ideally suited for DHW heating and central heating backup. Thanks to the freely available solar energy, your investment will pay for itself within a few years through high savings on fossil fuel.

Of course, new build is optimally suited for the perfect design of an energy-saving heating system. For this, Viessmann offers the ideal combination of advanced condensing technology and powerful solar collectors.

You basically have the option of using solar energy for DHW heating and central heating backup. The savings on oil or gas are considerable, as you will be able to reduce the energy used to heat daily DHW by up to 60%. If you combine the heating of DHW and central heating, your annual savings can be up to 35% of the total energy required.

Solar thermal system with dual-mode DHW cylinder

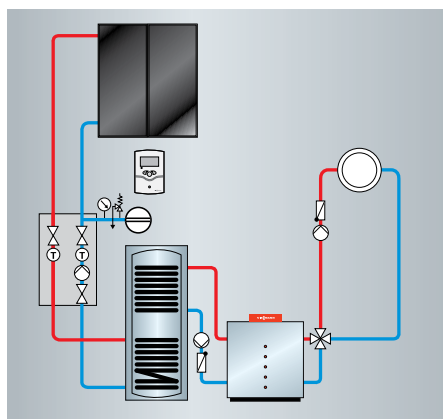
The heart of this solution is the dual-mode DHW cylinder, with two heating coils. When there is sufficient solar energy, the heat transfer medium in the solar thermal system pre-heats the water in the DHW cylinder via the lower coil, reducing the requirement from the boiler.

When the temperature drops through water being drawn off, such as for a bath or shower, the boiler will start if required to provide additional heating via the upper coil.

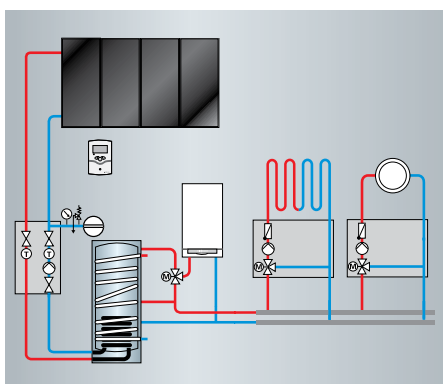
The range in which additional energy must be provided ultimately depends on the size of the collector area and the capacity of the DHW cylinder.

Solar thermal system for DHW heating and central heating backup

The heat transfer medium heated up in the solar collectors can be used for back-up heating. For this, a separate heating buffer cylinder is additionally heated by the solar collectors. When hot enough, the solar control unit feeds this solar heated fluid into the heating circuit, reducing the heating load on the boiler.

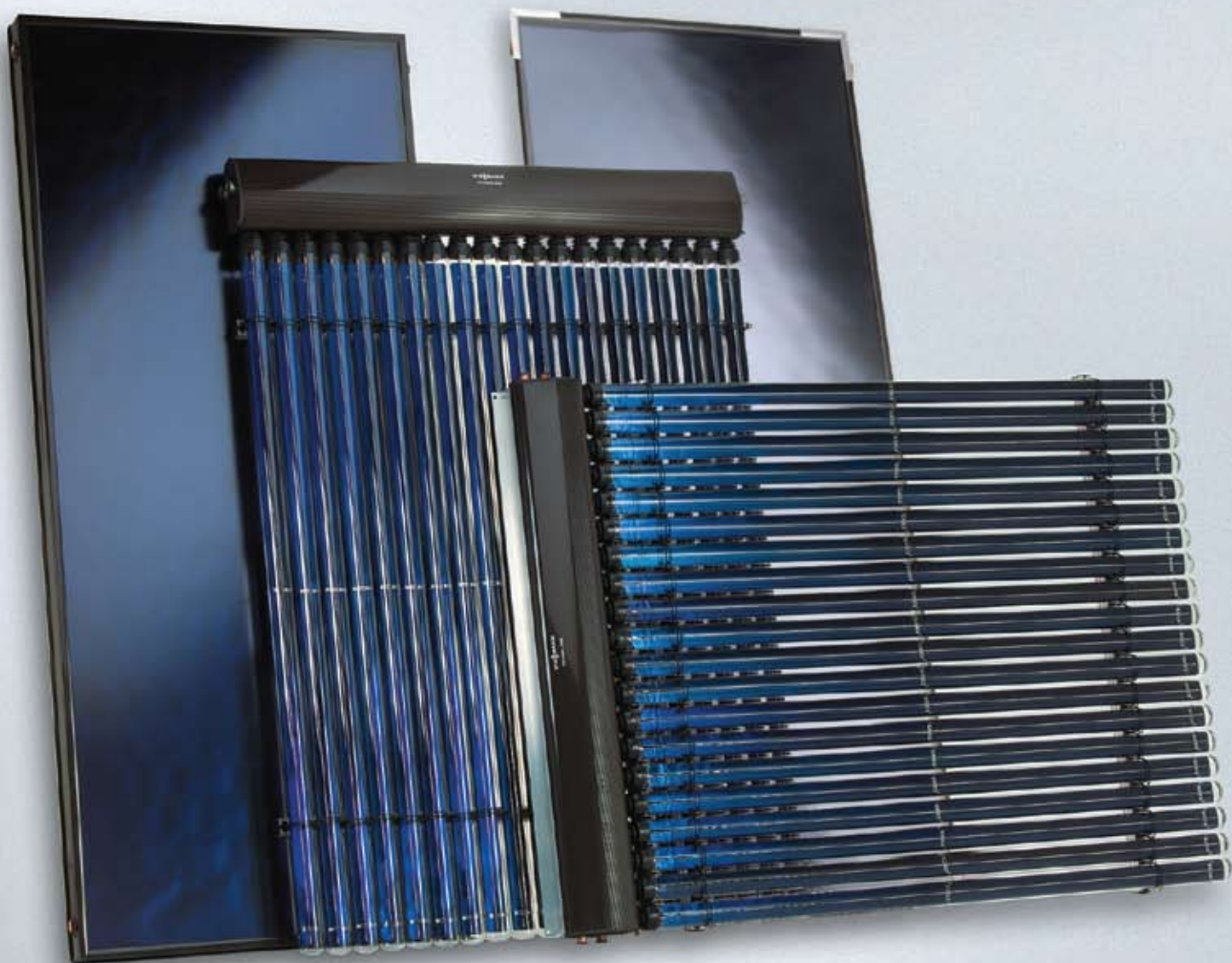


Solar domestic hot water



Solar domestic hot water and central heating back up

With Viessmann, the complete heating and solar technology comes from a single source. All components are perfectly matched.



VITOSOL

With a wide range of flat plate and tube collectors, Viessmann provides flexible and individual solutions for every kind of modern heating system.

Every year, the sun radiates an average of 1 000 kWh onto every square metre of central Europe. This corresponds to the energy content of 100 litres of fuel oil. With Viessmann, you can utilise this energy to generate heat. A solar thermal system is the ideal extension to any heating system, and lowers energy consumption in the long term.

The heating system that loves the environment

Even when it comes to environmental compatibility, with Viessmann solar thermal systems you'll be on the sunny side of the street. On average, in a family home, about three quarters of a tonne less carbon dioxide (CO₂) is produced.

Futureproof in every respect

All Viessmann flat plate and tube collectors are distinguished by their high operational safety and long service life. No wonder, the Vitosol solar collectors are made of corrosion and UV resistant materials. This is most impressively verified by quality tests according to the EN 12975 test standard, which at the same time also confirms the consistently high thermal output.



Vitosol 300-T

Vacuum tube collectors with heat pipe technology for the highest level of operational reliability.

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Vitosol 200-T

Vacuum tube collectors with heat pipe technology for the highest level of operational reliability.

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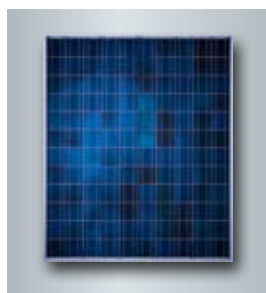


Vitosol 200-F

Vitosol 100-F

Powerful, durable and easy to install flat plate collectors.

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Vitovolt 200

Photovoltaic panel with crystalline silicon technology.

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Solar technology
Tube collectors

Vitosol 300-T
Vitosol 200-T



VITOSOL 300-T

VITOSOL 200-T

Highly efficient tube collectors with time-saving and safe plug-in system.

The Vitosol 300-T and Vitosol 200-T vacuum tube collectors are recommended for systems which are not in continuous operation. They work according to the proven heat pipe principle, which provides particularly high operational reliability and gives the collector reliable protection against overheating.

Effective use of the sun's heat

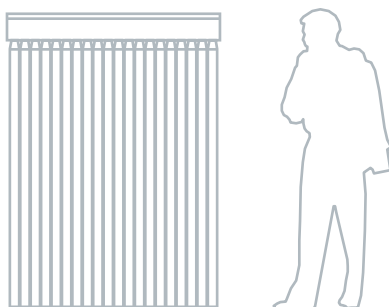
The Sol-titanium coated absorbers collect a vast amount of solar energy and thereby ensure high efficiency. The vacuum in the tubes guarantees very effective thermal insulation. There are therefore almost no losses between the glass tubes and the absorber, enabling the collector to convert even low levels of solar radiation into useful energy.

High energy yields for years to come

Viessmann solar collectors are designed for an exceptionally long service life. This is guaranteed by the use of high-grade, corrosion-resistant materials, such as glass, aluminium, copper and stainless steel. The absorber is an integral part of the vacuum tube. This protects it from weather influences and contamination, and ensures lasting energy utilisation.

Quick and safe installation

Vitosol tube collectors are delivered in a modular design. An innovative plug-in system enables the simple and quick installation of the tubes, without requiring tools or having to open the header casing. Plug the tubes into the manifold – click – done. The stainless steel corrugated plug-in connectors interconnect the individual collectors. The individual tubes can then be rotated for optimum alignment with the sun.



VITOSOL 300-T

With the Vitosol 300-T, Viessmann offers a high performance vacuum tube collector that meets the highest demands for efficiency and safety.

The high performance Vitosol 300-T vacuum tube collector is based on the proven heat pipe principle. The preferred areas of application for the Vitosol 300-T include systems in which no heat is transferred over a prolonged period of high solar radiation. This includes school buildings, for example, in which no energy is required during the summer holidays. Here, the dry connection of the heat pipe tubes inside the header ensures particularly high operational reliability.

Heat pipe principle for high operational reliability

In heat pipe systems, the solar medium does not flow directly through the tubes. Instead, a process medium evaporates in the copper pipe below the absorber and transfers the heat to the heat transfer medium via a heat exchanger.

Duotec: Twice the benefit

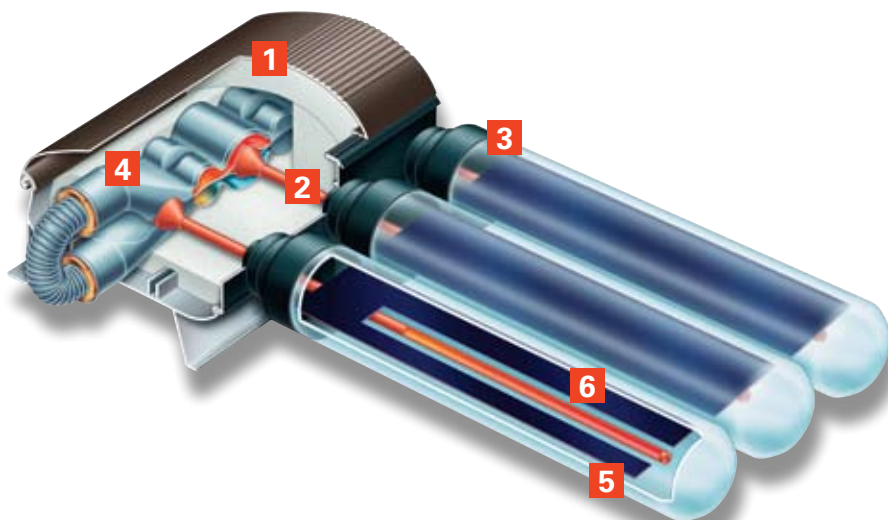
The condensers are completely surrounded by the patented Duotec twin-pipe heat exchanger. This absorbs the heat particularly well and passes it into the heat transfer medium flowing past it.

Simple maintenance and installation

During installation, the collectors are rapidly interconnected through the proven stainless steel corrugated pipe plug-in connectors. The individual tubes can be precisely aligned with the sun by axial rotation. The tubes are connected in a dry state, i.e. without direct contact between the process and the heat transfer medium, thus ensuring a perfect tube connection. It is also possible, for example, to replace individual tubes when the system is already filled.

High-grade materials

High-grade, corrosion-resistant materials ensure safety, operational reliability and a long service life. Among other materials, glass, aluminium, copper and stainless steel are used.



Vitosol 300-T

- 1 Highly effective thermal insulation
- 2 "Dry" connection, no direct contact between process and heat transfer medium
- 3 High-grade, low ferrous glass
- 4 Duotec twin-pipe heat exchanger
- 5 Heat pipe
- 6 Sol-titanium coated absorber



Vitosol 300-T offers universal application options on the roof and on walls.



Efficient heat transfer through fully encapsulated condensers and twin-pipe Duotec heat exchanger.

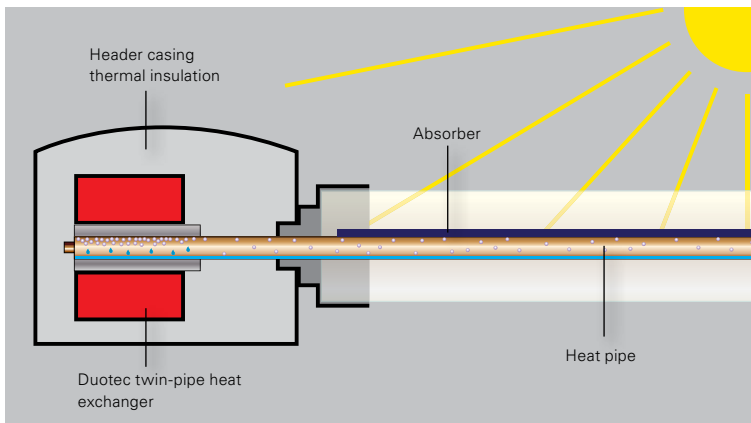
Take advantage of these benefits

- Highly efficient vacuum tube collector based on the heat pipe principle for high operational reliability
- The Sol-titanium coated absorber surfaces, which are integrated into the vacuum tube, are not susceptible to contamination
- Tubes can be rotated for optimum alignment with the sun, thereby maximising the energy yield
- Highly effective thermal insulation of the header casing for minimum thermal losses
- Easy installation through the Viessmann assembly and connection systems

For specification, see page 28.

VITOSOL 200-T

The Vitosol 200-T is a highly efficient tube collector with a time-saving and safe plug-in system for installation in any location.



The water heated by the sun evaporates and shifts to the colder part of the tube. There the steam condenses, transfers the heat to the collector and is reheated in a new cycle.

With the Vitosol 200-T vacuum tube collector, Viessmann increases the reliability of solar collectors to the extent that they can be installed anywhere. This collector can be installed vertically and horizontally at any angle between 0 and 90 degrees. It is as suitable for private as for commercial systems. Here, the dry connection of the heat pipe tubes inside the header and the small amount of fluid inside the collector ensure particularly high operational reliability. The collector is available either with 20 tubes (= 2 m²) or with 30 tubes (= 3 m²).

Heat pipe principle for high operational reliability

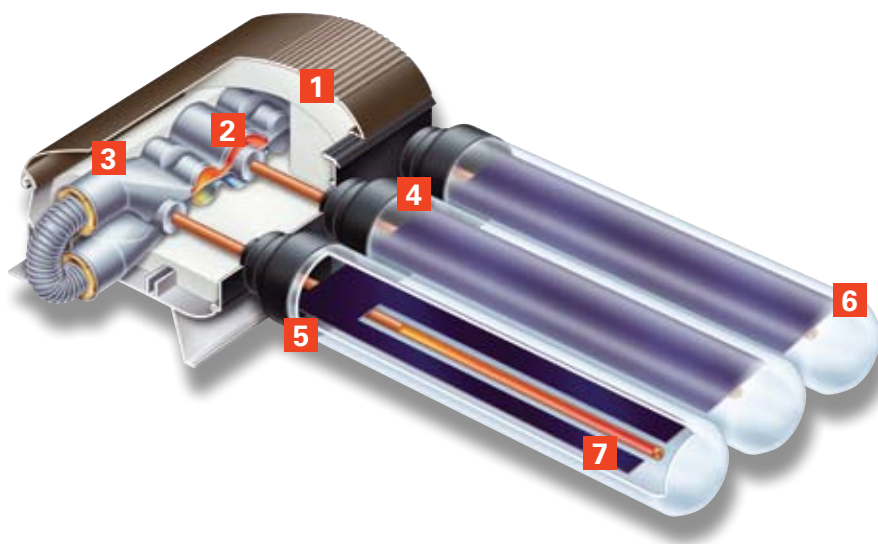
In heat pipe systems, the solar medium does not flow directly through the tubes. Instead, a process medium evaporates in the copper pipe below the absorber and transfers the heat to the heat transfer medium via a heat exchanger.

Making the most of solar energy

To convert the maximum amount of solar energy into heat, every tube can be optimally aligned towards the sun, which maximises energy utilisation. The highly effective thermal insulation in the header casing minimises heat losses, particularly during spring and autumn, and through cold winters.

Quick and easy installation

Standard installation material made of stainless steel simplifies collector installation. During maintenance, an innovative plug-in system allows tubes to be replaced quickly without the need for tools. Corrugated stainless steel plug-in connectors make the installation of several collectors in series very much easier than the connection by conventional plumbing methods.



Vitosol 200-T

- 1 Highly effective thermal insulation
- 2 "Dry" connection, no direct contact between process and heat transfer medium
- 3 Duotec twin pipe heat exchanger
- 4 Tubes are easy to replace and rotate
- 5 Highly selective coated absorber
- 6 High-grade, low ferrous glass
- 7 Heat pipe



Example of using Vitosol 200-T tube collectors.

Take advantage of these benefits

- Universal application through installation in any location, horizontal or vertical, from 0 to 90 degrees on rooftops, walls or freestanding
- Easy and safe connection of the individual tubes through an innovative plug-in system
- The absorber surfaces, which are integrated into the vacuum tubes, are not susceptible to contamination
- Tubes can be rotated for optimum alignment with the sun, thereby maximising the energy yield
- Highly effective thermal insulation of the header casing for minimum thermal losses
- Easy assembly through the Viessmann fixing system and corrugated stainless steel connectors
- Reduced strain in the heat medium during stagnation due to less volume and faster drainage
- "Dry connection" allows replacement of individual tubes without draining the system

For specification, see page 28.

Solar technology
Flat plate collectors

Vitosol 200-F
Vitosol 100-F



VITOSOL 200-F

VITOSOL 100-F

The Vitosol 200-F is a high specification flat plate collector and was granted the highest possible rating by the German consumer association equivalent to UK's 'Which?'.

For DHW heating

The Vitosol 200-F/100-F flat plate collectors stand out because of their high quality, lasting operational reliability and high efficiency. They are particularly suitable for DHW heating.

Attractively designed, individual solar collectors

The Vitosol 200-F can be integrated into the roof cover. Optional edge trims help to create a harmonious transition between the collector surface and the roof. Upon request, frames are also available in special colours.

Weatherproof

The Vitosol 200-F casing consists of an all-round aluminium frame. The pane seal is also seamless, resilient, as well as weather and UV resistant.

Easy installation

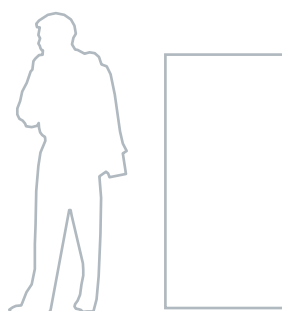
The Vitosol 200-F/100-F are particularly easy to install. The integral flow and return pipes enable simple and secure installation. With the Vitosol 200-F larger collector arrays of up to 12 panels can be easily linked in parallel.

Tailor-made for every demand

With their absorber areas of 2.30 m², the Vitosol 200-F/100-F flat plate collectors can be effectively matched to any energy demand. The collectors can be installed vertically or horizontally. The Vitosol 200-F is a high specification flat plate collector and was granted the highest possible rating by the German consumer association equivalent to UK's 'Which?'.



Outstanding quality you can rely on: The German consumer association "Stiftung Warentest" gave the Vitosol 200-F the highest possible rating, in its March 2008 edition. More information at: www.test.de.



Vitosol 200-F: earns top marks

In the "Stiftung Warentest" comparison test with 11 other solar thermal systems in March 2008, the Vitosol 200-F was judged to be "Very good", the highest possible rating. This powerful flat plate collector with a selectively coated copper absorber is the solution for DHW heating. On average, up to 60% of the energy required annually for DHW heating can be saved.

Looking good

The Vitosol 200-F collectors will captivate you with their attractive design. The frame is finished in RAL 8019 brown as standard and blends subtly into most roofs. When requested the frame is also available in all other RAL colours. Optional edge trims ensure an aesthetically pleasing transition between the roof and collectors (as seen opposite).

Attractively priced

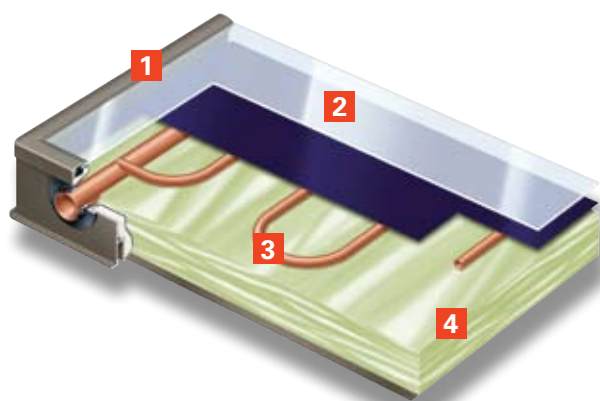
The Vitosol 100-F collector is an attractively priced option, ideally suited to above roof installations for small standard applications.

Permanently sealed and well insulated

The Vitosol 200-F has a weather resistant aluminium frame and seamless seal guaranteeing permanent tightness and stability. This reliability prevents the frame freezing up through standing water in the joints between the frame and glass. The back panel is puncture-proof and corrosion-resistant. Highly effective thermal insulation reduces heat losses particularly in spring, autumn and winter.

Easy to handle

It couldn't be easier to install the Vitosol 200-F/100-F flat plate collectors in parallel using flexible corrugated stainless steel plug-in connectors. The easy to assemble Viessmann fixing system with load-tested and corrosion-resistant components made from stainless steel and aluminium is standard for all Viessmann collectors. The Vitosol 200-F flat plate collector can be used universally for roof top installation, roof integration and freestanding installation, e.g. on flat roofs.



Vitosol 200-F Vitosol 100-F

- 1** Seamless, painted aluminium frame, available in all RAL colours (Vitosol 200-F)
- 2** Stable, highly transparent cover made from special toughened glass
- 3** Copper meander
- 4** Highly effective thermal insulation



With optional edge trims in all RAL colours, the Vitosol 200-F solar collectors blend harmoniously into most roofs.

Take advantage of these benefits

- Permanently sealed and highly stable through all-round folded aluminium frame
- Quick and reliable collector connection through flexible corrugated stainless steel pipe plug-in connector
- Universal application for freestanding and rooftop installation

The bonus with the Vitosol 200-F

- Powerful flat plate collector with a selectively coated aluminium copper absorber
- Roof integration option

The bonus with the Vitosol 100-F

- Low investment costs

For specification, see page 28.

Photovoltaic
modules

Vitovolt 200



VITOVOLT 200

Installing a photovoltaic system isn't rocket science. With the fully assembled panels, you too could soon be getting power straight from your roof.

Installing a Vitovolt photovoltaic system on the roof turns every homeowner into a power generator. Fit photovoltaic panels onto the roof, plug leads together, connect an inverter, done!

Vitovolt function explained

Basically, a mains-connected solar power system operates in three stages:

1. Harvesting energy

Electrons are released when light strikes the photovoltaic panels. Positive or negative charge carriers collect at the electrical contacts, resulting in a DC current between the front and back of the cell. This photoelectric effect is produced without mechanical or chemical reactions, and so is maintenance-free and not subject to wear.

2. Power conversion

DC power produced by the solar generator is converted by the inverter into AC power, suitable for the power network (230 V AC at 50 Hz). Proven safety standards and fully developed power processors, as well as cutting edge electronics, ensure effective conversion of the solar power.

3. Energy utilisation

Contrary to stand-alone systems where the solar power must be stored in rechargeable batteries, systems linked to the mains feed all harvested power directly into the public grid. A separate meter is installed which monitors the power fed into the mains system. The generated energy is reimbursed by the electricity supply utility.

Vitovolt 200: High performance module at an affordable price

The photovoltaic module comprises a glass laminate, with individual solar cells being embedded between two plastic foils. A weather resistant cover foil is used as the back of the module. Panes and foils are laminated together to protect the cells reliably against external weather influences. The fully wired module is particularly easy to install on the roof thanks to its low weight.

Easy installation

The connection of the photovoltaic modules is prepared at the factory where cables are simply plugged together, whilst the inverters are matched to the individual photovoltaic system. Ready-to-use installation sets are available for the vertical and horizontal above roof installation. The robust aluminium frame of these modules ensures excellent pressure and suction load limits.



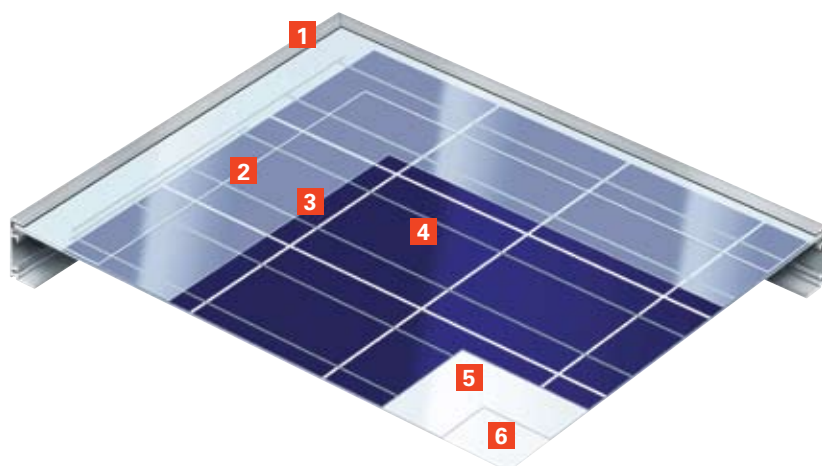
Vitovolt photovoltaic system

If you produce your own power, you can receive a guaranteed remuneration in form of Feed-In Tariffs (also known as FITs). The tariffs have been introduced by the Government to help increase the level of renewable energy in the UK towards our legally binding target of 15% of total energy from renewables by 2020 (up from under 2% in 2009).

Power for your own consumption continues to be drawn from your local power supply utility at the usual tariff. The feed in tariff for environmentally friendly photovoltaic systems is higher than the consumption tariff. The main benefit of the Feed-In Tariffs is the generation tariff, which is paid for every kilowatt hour of electricity produced. The amount paid per hour is determined by the type of technology and the size of the system.

The Feed-In Tariffs scheme also provides two further benefits: an additional payment for surplus energy exported to the grid (this is called the export tariff) and a saving on energy purchased from your electricity supplier. The Tariffs give three financial benefits:

- A payment for all the electricity you produce, even if you use it yourself
- Additional bonus payments for electricity you export into the grid
- A reduction on your standard electricity bill, from using energy you produce yourself



The Feed-In Tariffs are based on the electricity generated by a renewable energy system which is used in the property. There is also an additional bonus for any energy produced which is exported to the electricity grid. This means you get paid more for the energy you don't use than for that which you do which encourages energy efficiency. For an average three to four bedroom household installing a 2.7 kWp solar PV system that generate electricity, the Feed-In Tariffs would provide the following benefits:

The electricity generated would pay the homeowner £928 a year tax-free. Remaining electricity costs would be reduced from £450 to £280: saving £170. Therefore the total benefit would be £1098 per year. This is based on an average use of 4,500 kWh of electricity per year and the installation of 2.7 kWp of solar PV panels.

Many who are building their own homes have recognised the benefits of generating power this way:

- You make a visible contribution towards protecting the environment. The use of photovoltaic systems reduces the damage caused by emissions and protects natural resources.
- The feed-in remuneration and various subsidy programmes make the investment worthwhile.
- The property becomes more desirable and valuable.
- Viessmann photovoltaic systems are designed to last for decades. Thanks to their simple operating principle, they are completely reliable and practically maintenance-free.

Vitovolt 200

- 1 Aluminium frame
- 2 Low ferrous glass cover
- 3 Top EVA film
(EVA = ethylene vinyl acetate)
- 4 Silicon cell
- 5 Lower EVA film
- 6 Backing film



With around 12 m² of Vitovolt 200 panels, nearly half the power consumption of a family home can be covered.



Vitovolt inverter.

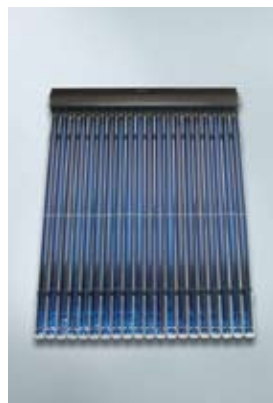
Take advantage of these benefits

- Output warranty for up to 25 years through the high quality standard applied to the selection of silicon cells
- All necessary components for the photovoltaic system are perfectly matched
- Quick installation with cables that simply plug together, and complete installation kits
- Fully wired inverter with display – data capture via remote display is also possible

The bonus with the Vitovolt 200

- High-quality single glazed panel with an attractive price/performance ratio

For specification see page 28.



Vacuum tube collector Vitosol 300-T

Heat pipe system

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Type			SP3A	SP3A
Version	m ²		2	3
Gross area	m ²		2.87	4.32
Absorber area	m ²		2.00	3.02
Aperture area	m ²		2.15	3.23
Dimensions (overall)	Depth	mm	143	143
	Width	mm	1 420	2 127
	Height	mm	2 040	2 040
Weight (incl. thermal insulation)	kg		58	87



Vacuum tube collector Vitosol 200-T

Heat pipe system

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Type			SP2	SP2
Version	m ²		2	3
Gross area	m ²		2.88	4.32
Absorber area	m ²		2.00	3.02
Aperture area	m ²		2.15	3.23
Dimensions (overall)	Depth	mm	143	143
	Width	mm	1 420	2 129
	Height	mm	2 040	2 040
Weight (incl. thermal insulation)	kg		58	87

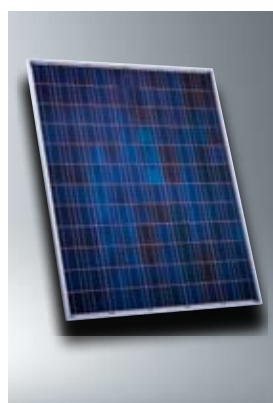


Flat-plate collector Vitosol 200-F

Vitosol 100-F

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Type			SV2	SH2	SV1	SH1
Gross area	m ²		2.51	2.51	2.51	2.51
Absorber area	m ²		2.32	2.32	2.32	2.32
Aperture area	m ²		2.33	2.33	2.33	2.33
Dimensions (overall)	Depth	mm	90	90	72	72
	Width	mm	1 056	2 380	1 056	2 380
	Height	mm	2 380	1 056	2 380	1 056
Weight (incl. thermal insulation)	kg		52	52	43	43



Photovoltaic panel Vitovolt 200

Page 24

Rated power			230 V
Module efficiency			13.94%
Mpp voltage			29.8 V
Mpp current			7.72 A
Dimensions (overall)	Depth	mm	1 665
	Width	mm	991
	Height	mm	50
Weight (incl. thermal insulation)			23 kg

More information on request or at www.viessmann.co.uk





VIESSMANN
VITOCELL 300

Comfort and economy with system design

Viessmann supplies you with all the technology you need from a single source.

For the complete solar thermal range, Viessmann supplies you with optimally matching system technology from a single source. All the components fit seamlessly together. This gives your heating and solar thermal system the guarantee of optimum efficiency and high operational reliability.

The Viessmann comprehensive product range includes solar collectors, specially developed combi DHW cylinders for use with solar thermal systems, the Vitosolic solar control units, the Solar-Divicon pump station for reliable hydraulics and thermal protection of solar thermal systems, plus oil and gas fired condensing boilers, wood burning boilers and heat pumps.

Correctly sized solar thermal systems with matching system components cover up to 60% of the annual energy demand for DHW heating of one and two-family homes, or up to 35% of the total demand for DHW and central heating.



Vitocell

Combi DHW cylinder with up to 1 000 litre capacity.

Pages 32/33



Vitosolic

Intelligent energy management for your solar and heating technology.

Pages 34/35



The Vitocell range from Viessmann offers the right DHW cylinder for every demand, ideally matched to your heat source.

DHW cylinders

Dual-mode DHW cylinders work to heat the DHW with separate indirect coils that are connected directly to the solar thermal system. If required, an electric immersion heater can be fitted at a later date.

Vitocell 300-B (300, 500 litre)

The heat absorbed by the solar collectors is transferred in the dual-mode Vitocell 300-B DHW cylinders to the DHW via a separate lower indirect coil. An indirect coil, arranged in the upper area and heated by a boiler, additionally heats the DHW on demand. The Vitocell 300-B is made from high alloy stainless steel.

Buffer cylinders

Vitocell 100-E

Versatile applications in heating systems with two or more heat sources, particularly suitable in conjunction with solar thermal systems, heat pumps and biomass boilers.

Vitocell 140-E and 160-E (750, 950 litre)

The installation is simplified through an integral solar heat exchanger. This process requires no additional pump. Solar yield can be improved through an additional stratification system (Vitocell 160-E).



DHW cylinders Vitocell 300-B

Cylinder capacity	Litre	300⁽¹⁾	500⁽²⁾
Overall Dimensions	Depth mm	704	974
	Width mm	633	923
	Height mm	1 779	1 740
Overall weight	kg	114	125

¹⁾ PUR-hard foam ²⁾ PUR-soft foam



Buffer cylinders in conjunction with solar collectors Vitocell 140-E

Cylinder capacity	Litre	750	950
Overall dimensions	Depth mm	1 004	1 004
	Width mm	1 060	1 060
	Height mm	1 895	2 195
Overall weight	kg	174	199



Vitocell 160-E ¹⁾

Cylinder capacity	Litre	750	950
Overall dimensions	Depth mm	1 004	1 004
	Width mm	1 060	1 060
	Height mm	1 895	2 195
Overall weight	kg	183	210

¹⁾ incl. stratification system



With the Vitosolic 100 and 200 solar control units, optimum use is made of the heat obtained from the solar collectors for DHW heating or central heating backup.

Intelligent energy management

Well-designed, electronic control units help to make maximum use of the solar energy. The Vitosolic control units are characterised by their simple operation.

With a Vitosolic solar control unit, you can use solar energy particularly effectively. This intelligent energy management system covers all conventional applications and can control up to four separate heat stores like cylinders and swimming pools.

By communicating with the Vitotronic boiler control unit, the Vitosolic ensures that optimum use is made of the heat obtained from the solar collectors and that as little additional energy as possible is needed for DHW or central heating. This relieves the boiler and reduces heating costs.

Thanks to a plain text display with menu guidance, the control unit is easy to operate and corresponds to the proven Vitotronic user interface. Information regarding the solar thermal system can also be scanned at the Vitotronic boiler control unit and the Vitotrol 300 remote control.

The bonus with the Vitosolic 100

The Vitosolic 100 is an attractively priced, electronic temperature differential control unit, and is primarily designed for heating DHW in solar thermal systems. A two-line display provides information about current temperatures and pump operating conditions.

- Attractively priced, electronic temperature differential control unit for heating DHW in solar thermal systems
- Easy operation – connects to the Vitotronic user interface
- Dual display provides information about the actual temperature and the operating conditions of the pump
- Small casing dimensions

The bonus with the Vitosolic 200

The Vitosolic 200 controls up to four systems – each with its own user interface. This control unit is primarily designed for multi-cylinder operation, heating swimming pool water and central heating backup. High operating convenience through four-line plain text display with menu guidance.

- Electronic differential control thermostat for up to four systems, each with its own user interface
- Easy operation – corresponds to the Vitotronic user interface
- High operating convenience through four-line plain text display with menu guidance
- Designed for multi-cylinder operation, swimming pool heating and central heating backup
- Large wiring chamber for easy installation

Solar-Divicon

Compact, complete and reliable - the Solar-Divicon pump station ensures correct functioning of thermal safety and hydraulic systems. Here, safety and functional components are compactly arranged into one unit, such as the solar pump, flow meter, thermometer and isolation and safety valves.



The Solar-Divicon is the compact pump station for all hydraulic functions.

The comprehensive product range from Viessmann



Individual solutions with efficient systems

Futureproof heating systems for all energy sources and applications

The comprehensive Viessmann product range

The comprehensive product range from Viessmann offers individual solutions with efficient systems for all applications and all energy sources. As environmental pioneers, the company has, for decades, been supplying efficient and clean heating systems for oil and gas, solar thermal and photovoltaic systems and heat generators for sustainable fuels and heat pumps.

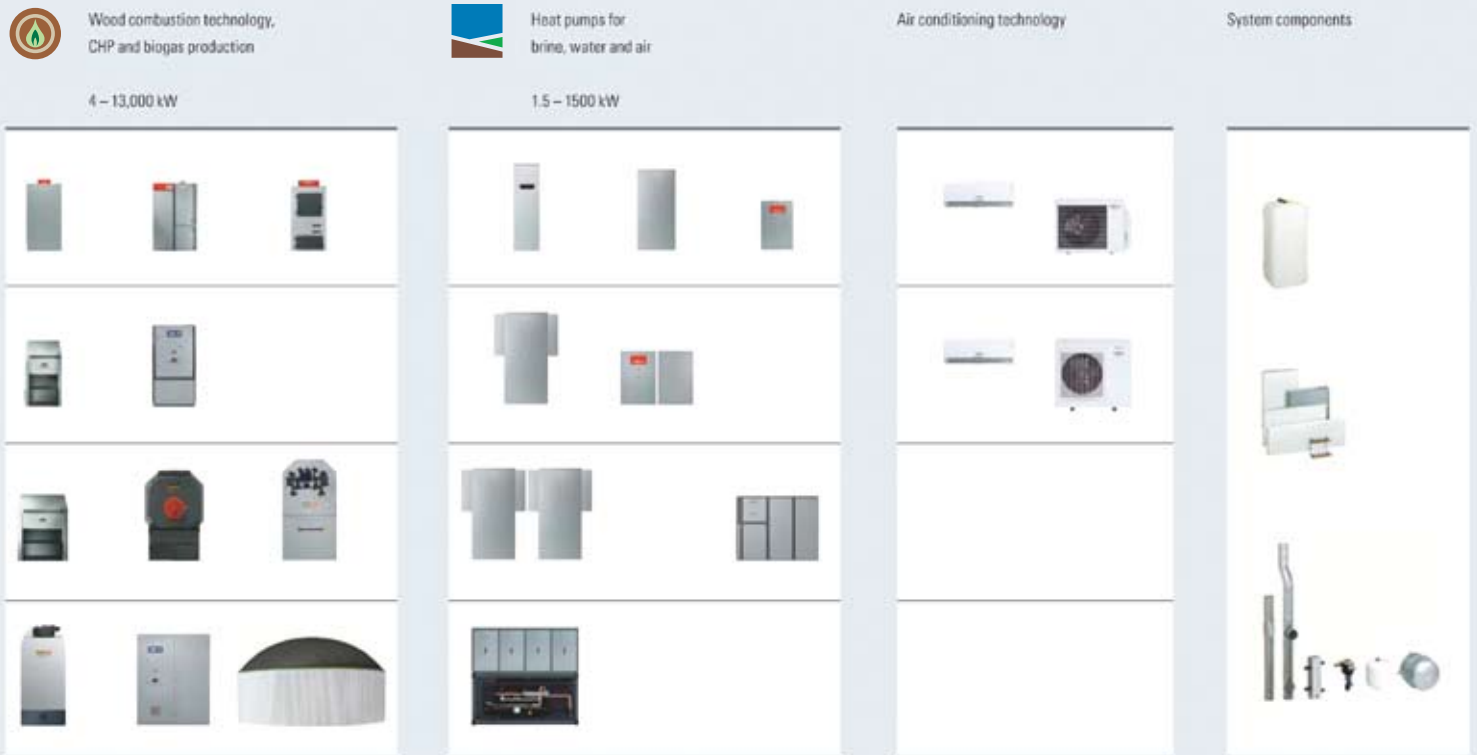
The comprehensive product range from Viessmann also offers superior technology and sets new benchmarks. With its high energy efficiency, our range helps to save heating costs and is always the right choice where the environment is concerned.

At Viessmann, protecting the environment and natural resources has already been enshrined in the company's principles.

Viessmann develops and produces innovative heating systems, which demonstrate top quality, energy efficiency and a long service life. Many of these products have become milestones of heating technology.

Individual and efficient

Viessmann offers the right heating system for any demand – wall mounted or floorstanding, in individual combinations – all are futureproof and economical. And whether for detached or semi-detached homes, large residential buildings, commercial/industrial use or for local heating networks; for modernising existing properties or new build – they are always the right choice.



The comprehensive product range from Viessmann:
Individual solutions with efficient systems for all energy
sources and applications.

Key performers

The Viessmann Group sets the technological pace for the heating industry. This is what the Viessmann name represents, and also what the names of the subsidiaries in the Group represent, as they are founded on the same pioneering spirit and power of innovation.

The company offers the following:

- Condensing technology for oil and gas
- Solar thermal and photovoltaic systems
- Heat pumps
- Wood combustion systems
- CHP modules
- Biogas plants
- Services

Viessmann is extremely specialised in all these market segments, yet at the same time the company has a crucial advantage over specialist suppliers: Viessmann understands heating technology as a systematic whole and offers unbiased advice on technology and fuel type. This guarantees the best solution for every application.

Viessmann Group

VIESSMANN

KWT

KOB

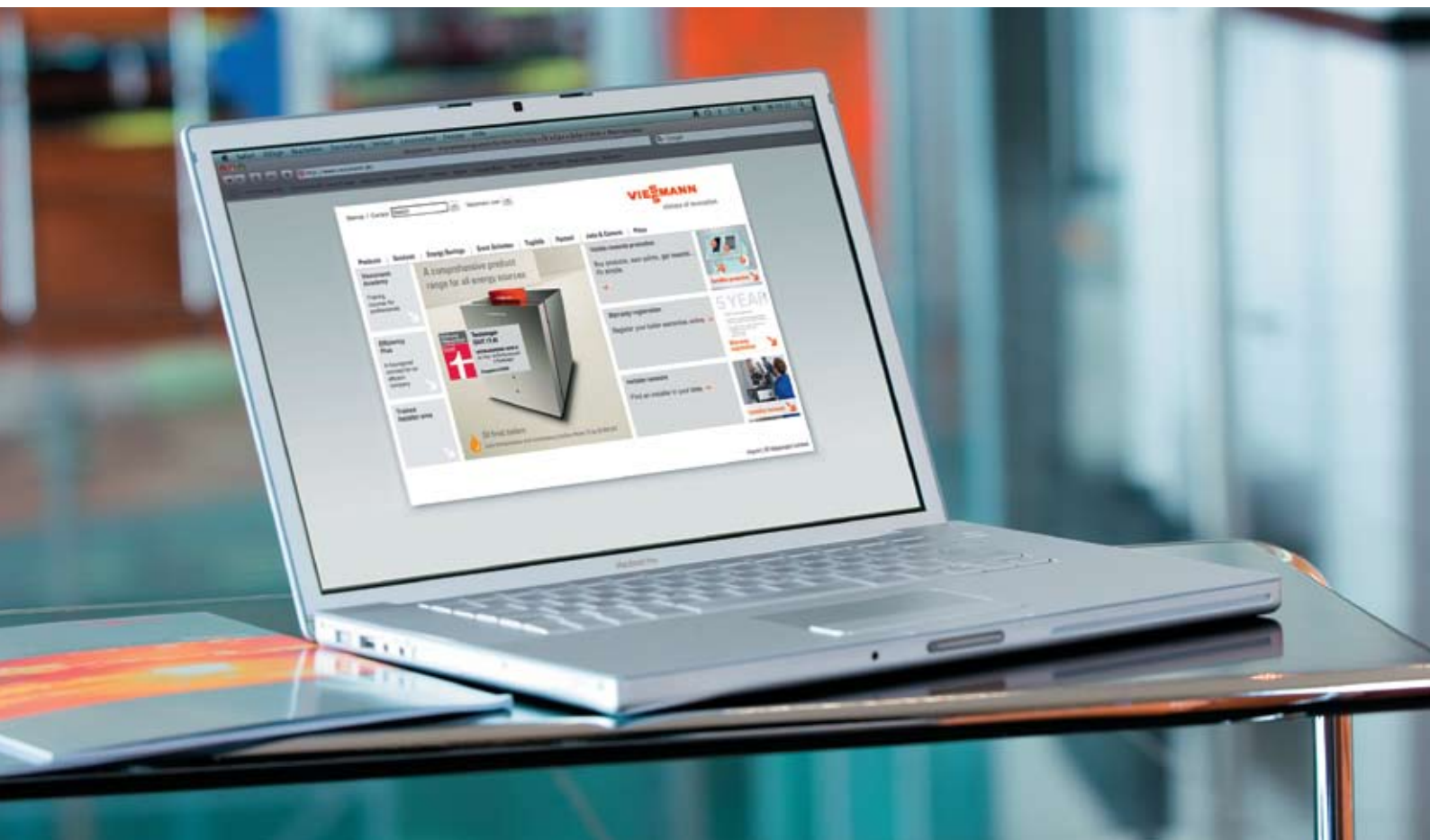
MAWERA

ESS

BIOFERM

Schmack

Carbotech



It's convenient to find out more from home: Viessmann online offers detailed information about products, subsidy opportunities and services.

Viessmann – always there for you

Viessmann is a family business, operating globally. In constant contact with associates, the company develops innovative solutions – always with your wishes and requirements in mind.

Viessmann contacts are your competent and enthusiastic local points of reference and will be happy to support you with any questions about heating and modernisation. You are best advised to arrange a personal consultation. Your Viessmann installer will be happy to help!

Viessmann online

For further information regarding our products and their output levels see www.viessmann.co.uk.

There you can obtain information on all Viessmann high efficiency, futureproof heating systems.

Viessmann - climate on innovation

The Viessmann brand promise is a concise expression of all that the company hopes to achieve. It is our key brand message and, together with our brand label, an identifying feature all around the world. The "climate of innovation" is three-dimensional: It is a commitment to a culture of innovation. It is a promise of high product utilisation and, at the same time, an obligation to protect the environment.

Comprehensive range for all energy sources

Viessmann is one of the leading international manufacturers of heating systems, providing individual solutions with efficient systems based on its comprehensive range for all application areas and energy sources. As an environmental pioneer, the company has, for decades, been supplying particularly efficient and clean heating systems.

Acting sustainably

For Viessmann, taking responsibility means acting sustainably. This means bringing ecology, economy and social responsibility into harmony with each other, whilst ensuring that current needs are satisfied without compromising the quality of life of future generations.

Efficiency Plus

With the "Efficiency Plus" sustainability project, Viessmann demonstrates at its own site in Allendorf that the political goals set for 2020 with regard to climate and energy can already be achieved today with commercially available technology.

This projects stands for:

- Climate protection
- Efficiency with resources
- and securing the company site

As a result, the site now saves 40 percent on fossil fuels and CO₂ emissions have been reduced by one third.



Viessmann won the German Sustainability Award 2009 for its commitment to climate protection and efficient use of resources.



For the particularly efficient utilisation of energy by the innovative heat recovery centre at the company's headquarters in Allendorf/Eder, Viessmann was presented with the Energy Efficiency Award 2010.

Viessmann Werke GmbH & Co. KG

Company details

- Established in: 1917
- Employees: 9400
- Group turnover: €1.7 billion
- Export share: 56 percent
- Manufacturing and plant construction in ten countries with 22 companies in Germany, France, USA, Italy, Canada, Poland, Hungary, Austria, Switzerland and China
- Sales representation in 74 countries with 32 wholly owned subsidiaries
- 120 sales offices worldwide
- 3 service companies

Performance spectrum

- Condensing technology for oil and gas
- Solar thermal systems
- Heat pumps
- Wood combustion systems
- Combined heat and power generation
- Biogas systems
- Air conditioning technology
- System components
- Services

The comprehensive range of products and services covers the entire spectrum. Output levels range from 2 kilowatt to over 20 megawatt.



climate of innovation

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